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Food & Sanitation

THE PUBLIC ANALYTICAL JOURNAL.

VOL. X.—No. 335.

LONDON: SATURDAY, JANUARY 7, 1899.

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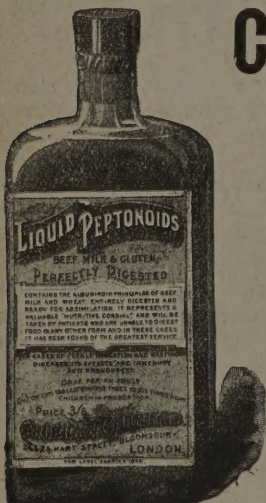
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Food and Sanitation.

SATURDAY, JANUARY 7TH, 1899.

SPECIAL NOTICE.

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FRAUD IN THE BUTTER TRADE.

REFERRING to the Agricultural Products Adulteration Bill introduced a few days before the close of last session, upon which the Council of the Royal Lancashire Agricultural Society have addressed a letter to the right hon. Gentleman, calling his attention to certain details, Professor James Long writes to a contemporary thus:

If this line is to be taken, the agitation might just as well be dropped altogether. From the very first it has been insisted, in season and out of season, by every body of agriculturists who have taken the matter up that nothing but a thorough measure could possibly prove of any value—a measure which is practically identical with the laws which have been passed in other countries, and which, in Denmark in particular, has been followed by magnificent results. The chief points are: (1) The prohibition of mixing butter and margarine for sale; (2) the prohibition of the artificial colouring of margarine; (3) the inspection of margarine factories, which follows as a natural sequence; (4) heavier fines. Among minor proposals, it has been urged that inspectors should be appointed under the Board of Agriculture for the purpose of keeping the local authorities up to the mark, and of carrying out the law in their stead when they fail to do their duty. These points were practically all adopted by the Select Committee and the majority of the members of the Royal Commission. The Government are asked to appoint a Board of Reference, chiefly with the purpose of dealing with standards, inasmuch as, largely through the decisions of the Government chemists, the limit adopted by the analysts of the country has been reduced instead of raised, and the effect of their work very largely depreciated. The Bill referred to proposes to give power to the Board of Agriculture to enforce the existing laws where local authorities fail to do so; to prohibit the importation of adulterated or impoverished milk or butter unless it is entered as such and marked with a name or description indicating that it has been so treated. It also provides for the sampling of butter by the Commissioners of Custom, and makes regulations for such inquiry as the Board of Agriculture may deem necessary for ascertaining the extent of the deficiency of the normal constituents of milk or butter, or the presence of any foreign matter in any sample of milk or butter where a presumption is raised (until the contrary is proved) that such sample is adulterated or impoverished. Margarine makers and dealers are also to keep registers of consignments for inspection. It is true that some of these proposals are among those which have been made from time to time by the agricultural party, but they are the minor proposals, and can have no possible influence in effecting any thorough change in the existing system. That change depends upon the prohibition of colouring and mixing. For example, it is useless to clothe a central authority with power to enforce ineffective laws such as the Sale of Foods and Drugs Act and the Margarine Act. The basis of the chief existing form of fraud is the fact that margarine is so skilfully mixed with butter that it cannot be detected by analysis. That unskilful mixture is detected everyone is aware, and doubtless more numerous punishments will be inflicted where local authorities generally do their duty, whether under compulsion or not. But it is not so much the small and unskilled trader as the manufacturer and the merchant who are to blame. Margarine is produced which resembles butter so perfectly that it can easily be sold as butter, and can as easily defeat the analyst and the law, and it is this fact alone which has compelled foreign Governments to legislate as they have done. I ventured to point out at the time of the passing of the Margarine Act—having acted on the Committee at the time—that it would practically become a dead letter; and if Mr. Chaplin's proposals are adopted the question will still remain an unsettled one. The views of the Select Committee were unanimous, and that committee sat during three years. The Royal Commission, after a searching examination of the question, was almost as unanimous. There were, indeed, but two members who took an opposite view. These were Mr. Chaplain and Mr. Walter Long; and it would seem that not only are the recommendations of both bodies overridden by Mr. Chaplin—the one man to whom tens of thousands of farmers looked for years as their only hope—but that, if we are to judge from the action of the Royal Lancashire Society, he is eventually to be supported. Under such conditions we have nothing to hope for from

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agricultural agitation, while the appointment of Parliamentary Committees and Royal Commissions must degenerate into a national farce. When a discussion recently occurred at the Lausanne International Congress, I was urged to point out that no law would succeed which did not embrace the points I have already mentioned. Finally, I would suggest: (1) That if mixing and colouring are allowed, skilled mixtures will still sell for butter, inasmuch as chemical analysis fails, although up to a point which is not absolutely defined. (2) That if mixing and colouring are prohibited under inspection, margarine will leave the factory or warehouse unmixed and in its natural colour, and that retailers, unskilled as they are, will be unable to prepare mixtures without detection, the most perfect mixtures depending for their sale as butter chiefly upon the proportion of insoluble fatty acids in the butter used. (3) That colour prevents differentiation as between pure butter and a skilful blend of butter and margarine, and that for this reason it would be useless to prohibit blending or mixing unless the prohibition of colouring followed. (4) That to prohibit colouring and to permit mixing or blending would equally fail, inasmuch as margarine could be blended with highly-coloured butters. Nor does the statement that detection is practically impossible depend upon a mere *ipse dixit*. In evidence I showed what had been done in Paris, and in the course of two sets of experiments carried out at my suggestion by the British Dairy Farmers' Association. In each case samples of butter and margarine were blended with the greatest care and divided for analysis by different chemists, who totally failed to supply even approximate details of their constituents. It is suggested that Clause 3, which I have almost quoted verbatim, by which the Board of Agriculture may make a certain inquiry, really confers upon the Board the power to determine standards. As a matter of fact, as the words suggest, the Board "may" inquire as to the composition of a particular sample, and they "may" make certain regulations for determining the deficiency of its natural properties. In the first place, the clause is permissive; in the second place, it is much too casual, open, and indecisive; and, in the third place, it practically leaves the matter to the Somerset House chemists, who, in the matter of milk, have been the greatest opponents of those who have striven to put down fraudulent adulteration. The question of preservatives is an open one, and has yet to be fought and won. In the current number of the organ of the trade in France the Chamber of Commerce of Rennes, the chief seat of the Brittany butter trade, petitions the Minister of Agriculture to permit the admixture of borax in butters for exportation. What is forbidden in France our neighbours coolly desire shall be permitted for export in England. The petition states, too, that the English importers of French butter admit that the addition of antiseptics preserves butter in a sweet condition without any danger to the consumer. The display at the Dairy Show at the Royal Agricultural Hall last week has shown the London trade, at all events,

that Ireland can supply both rolls and cases of fine mild butter equally as good as that produced in France, and without the addition of these antiseptic drugs. The trade, however, is enormously prejudiced, and it is in the majority of instances as useless to appeal to the national sentiment of the money-grubber as it is to his common sense. But the fact remains that Ireland can now supply what so many believe it to be impossible to obtain from France or Denmark.

WATER AT SPIRIT PRICES.

At the Middlesbrough County Police Court on Dec. 29th Councillor Bryan McNulty, of the Victoria Hotel, South Bank, was charged with selling whisky which, when analysed, showed 4½ per cent. of added water.—Mr. J. T. Belk defended, and in pleading guilty, said his client was well known as being connected with several licensed houses in the district. The whisky complained of had lost strength through age, and was not intended for sale, but for show. A fine of £5 and 9s. 6d. costs was imposed.

At Battle, on December 27th, John Pilbeam, landlord of the "Lamb Inn," Hooe, was summoned for selling adulterated whisky.—Inspector Latham deposed that on the 3rd December he called at the "Lamb Inn," Hooe, and saw a servant, Florence Midmore, who was in the bar. He asked for three-quarters of a pint of Irish whisky and tendered 2s. 6d. The woman served the quantity asked for and the charge was 2s. Witness then told her the reason why he had purchased it and offered to divide it into three parts. The analyst had certified that the spirit was 3.42 under proof.—Defendant said that the bottle from which the spirit was taken was a sample sent him. So far as he was concerned, he was innocent of the charge.—Fined £2 and costs.

At Bromyard, Mrs. Frances Pitt, of the "Five Bridges Inn," Much Cowarne, widow, was charged by Superintendent Lewis with selling adulterated whisky.—Mr. Wise, from the office of Mr. Cave, appeared for the defendant, and pleaded not guilty.—P.C. David Thomas stated that on the 16th ult. he went to the inn about 6 p.m., and the superintendent followed him. Defendant came, and he produced a bottle and asked her to supply him with a pint of whisky, for which he paid her 2s. 9d. She asked him if his name was Mr. Bullock, and he replied that it was not; he was a police constable, and had purchased the whisky for the purpose of its being analysed. She asked him if he was a judge, and he said he was not, being a teetotaler. She then asked him to allow her to change the whisky she had given him, as she had put some water with the whisky she had sold him. He too told her he could not allow her to do this. The superintendent then drove up, and witness gave the whisky to him.—Superintendent Lewis said he drove P.C. Thomas to defendant's house, and gave him instructions what he was to do. When he arrived, he divided the pint of whisky into three bottles, telling defendant for what purpose it had been purchased. She saw him divide the liquor. One bottle he told her to keep, and one he sent to be analysed by Professor Voltger, and whose certificate he produced.—The whisky, it stated, was 27 degrees under proof, being two degrees under the minimum quality allowed under the Food and Drugs Act.—By Mr. Wise: Mr. Wise said his client was an illiterate woman; that she had been the tenant of the inn for fourteen years, and that this was the first time she had appeared before the Bench. The traveller for the firm from which she had purchased the whisky told her the quantity of water she could dilute the same with, so as to come within the requirements of the Act, but she never did put the quantity of water he told her. She had since been informed that the whisky she had been receiving was 10 degrees under proof, and not proof, as stated by the traveller from whom she had purchased it.—The defendant was fined £1 and 10s. costs.

At Cheltenham, on December 23rd, Thomas Richards, innkeeper, "Duke of Sussex Inn," was summoned for

selling a pint of whisky, containing only 67 per cent. of proof spirits, being 33 degs. under proof, instead of 25 degs. on December 5th. Mr. A. Lamb appeared for the defendant, who pleaded guilty.—Warrant Officer Lane said he went to the "Duke of Sussex Inn," and bought a pint of whisky for 2s. as stated in the summons. Mr. Lamb said the defendant was not the licensee at the time, and was ignorant at the time that the whisky was not the right strength.—Fined £2 and 17s. 6d. costs.

MEAT.

At Clerkenwell, on December 30th, Walter Fisher, of Constitution hill, Sprowston, Norwich, was summoned before Mr. Bros, for depositing at the shop of Messrs. Corne Bros., 93, Cowcross street, four quarters of beef which were unsound and unfit for human consumption.—Mr. Matthew Hale prosecuted on behalf of the Holborn District Board of Works, and said that the defendant was a dealer in animals and well-known at Norwich.—His story was that he met a man in the street, who was a stranger to him, on December 3rd, and purchased from him four quarters of beef. The defendant said the man told him the animal had broken an ankle. After the meat was seized the defendant declared that it was as fresh as a daisy, and that he had sent a lot worse to London. The animal was known in the trade as a "waster."—The sanitary inspector said he seized the meat on December 6th. It was emaciated, and entirely devoid of fat. The flesh was soft, wet, of magenta colour, and smelt offensively. The animal was at least twenty-two stone under the normal weight of one of its size.—Dr. Bond, medical officer for the Holborn district, said the animal had evidently suffered from a wasting disease.—Mr. Ricketts, jun., who appeared for the defence, said his client purchased the animal at Norwich on market-day, and gave £3 10s. for it. He had sent meat to London before, but it had never been condemned. Fisher was only twenty-one years of age, and although in his father's employment he himself occasionally dealt in animals.—Mr. Bros said there was no doubt as to the badness of the meat, but he would give the defendant the benefit of the doubt and dismiss the summons.

At Houghton-le-Spring on Dec. 29th, Edward Lowery, a butcher at High Dubmire, was charged with exposing for sale the hind-quarter of a cow which had died from tuberculous inflammation. Defendant was fined £5 and costs, with the alternative of a month's imprisonment.

MILK.

At Tewkesbury, on December 30th, John Goddard Roberts, dairyman, was fined £1, and £4 3s. 4d. costs, for selling milk containing 30 per cent. of water.—The defendant, through his solicitor, denied that he had anything to do with the milk a fortnight ago, and the case was adjourned for a sample of milk to be taken from the cow, it being suggested that milk showing a result similar to that of the analysis was given by the cows.—Mr. Embrey, the county analyst, said the instrument used by the defendant was useless and misleading for the purpose of testing milk. He had examined samples taken from the cow, and found the milk to be more than ordinarily rich.

At Grimsby, on December 28th, Harriet Beautiman, Waterloo Street, was summoned for selling milk adulterated with 7 per cent. of added water.

Defendant said she sold the milk just as purchased, and had "every confidence in it" until her attention was drawn to the quality.

Mr. Twiss : This is the usual defence—"I sold it as I got it." These cases are not satisfactory; for no doubt the defence may be perfectly true, yet a fine must be imposed.

The Town Clerk : We have no reason to doubt the defence.

Defendant was fined 5s. and costs, Mr. Twiss remarking : You should get a guarantee that the milk you are supplied with is pure.

Ed. Ramskir, Margaret Street, was summoned for selling milk adulterated with 8½ per cent. of added water.

Mr. Holdich urged a defence similar to that in the last case.

Mr. Twiss : It may often happen that magistrates who sit here fine persons who are really innocent; still, they cannot help it. I wish persons would get guarantees, and the proper individuals could then be proceeded against.

Fined 5s. and costs.

At Wednesbury County Police Court, on December 20th, William Turner, proprietor of the Walsall Creamery Company, Walsall, and Enoch Rudge, his assistant, were summoned for selling milk which was not of the nature and substance demanded, being adulterated with 24 per cent. of added water.—Mr. C. A. Loxton (Walsall) defended.—Samuel Edward Toy, the assistant of Mr. H. Van Tromp, inspector of Food and Drugs for the county, stated that on the 19th ult. he purchased a sample of milk from Rudge, at Tipton. Mr. Van Tromp said he submitted the sample for analysis, and Mr. E. W. T. Jones stated that it contained 24 per cent. of added water.—In cross-examination Mr. Jones said he did not make the analysis himself, but checked the figures afterwards. Mr. Loxton thereupon submitted that there was no case. The proof must be the best proof, and given by the actual person who made the analysis. The assistant should have been called to prove his work.—A legal argument ensued, in the course of which Mr. Jones said he actually saw the solids weighed in the matter.—Mr. Loxton further urged that Turner knew nothing of the incident. He traded as the Walsall Creamery Company, and his branches purchased milk by contract from a farmer. This farmer he had there, and he would say that the milk was pure and good at the time it left him. It was sent to Dudley station, and should have been received the same night, but did not turn up until next morning.—The farmer was called, and said the milk was pure when it left him. Railway companies would not let them fasten up their churns.—The stipendiary said there really was no defence in the case. He had before now stated that in his opinion it was a mistake on the part of the Railway Company not to allow churns to be locked up. Nevertheless, so far as the vendor of milk was concerned, it was clear in law that he was practically the insurer that he sold that which was pure. The reason the law was apparently unduly against the vendor of milk was no doubt because it was important that the substance should be delivered in a pure state to the consumer. In this case the amount of added water was serious.—Turner was fined £5 and costs, and Rudge 5s. and costs.

MARGARINE.

At Birkenhead, on December 23rd, Henry P. Mann, 368, Borough Road, was summoned for having sold a mixture, which contained a large percentage of margarine, without a label on which was printed margarine.—Mr. Fearnley prosecuted on behalf of the Corporation.—From the evidence it appeared that Mr. Dawson, inspector of nuisances, purchased some butter, at 10d. a pound, and was told that it was not pure butter. The defendant was informed that the butter would be analysed. Subsequently a certificate was received from the analyst, stating that the butter contained a large percentage of margarine. Mr. Dawson then bought some more butter which was marked "absolutely pure," and this he also sent to the analyst, and that also was impure.—Mann was fined £3 10s., including costs.

THOMAS BROADHURST, 82, Orford Lane, Warrington, was charged at the Warrington Borough Police Court with selling butter which was adulterated with 70 per cent. of foreign fat. He was further charged with exposing a quantity of margarine for sale without a label being attached to it.—Inspector Numan stated that he went into the shop of the defendant and asked for a pound of butter. He paid 1s. for it, and then divided it into three parts, and told the defendant that he would submit it to the public analyst. The defendant then said it was pure butter, as he never

sold margarine. On submission to the public analyst, it was shown that there was not a particle of butter in it, and that it was chiefly composed of foreign fat. The defendant, upon being informed of the result of the analysis, said that the wholesale dealer who supplied the butter had promised to stand by him and pay whatever costs were imposed. Witness subsequently visited the shop of the wholesale dealer in question and bought some butter, but found that pure. The margarine in the shop of the defendant had no label to indicate that it was margarine.—The defendant was fined 40s. and costs on the first charge, and 20s. and costs on the second.

At Uckfield Petty Sessions, Ephraim Wood, grocer, of Maresfield, was summoned for retailing margarine without having the package properly labelled. There was a further summons against defendant for exposing margarine for sale without having it labelled as such.—Defendant pleaded guilty.—Mr. T. Latham, inspector under the Food and Drugs Act, who proved the case, said the offence was purely a technical one.—A fine of 6d. and 7s. costs was inflicted for each offence.

At Newcastle Police Court, on December 30th, Geo. Davidson, a dealer in margarine, was charged with not having his tubs branded or durably marked "margarine." The defendant's men were found scraping off the brand on the tubs by the defendant's instructions. The defendant urged the inspector to ask the Sanitary Committee to look over it, and he would not again remove the marks. As it was a most serious offence, Mr. Sanders, from the Town Clerk's office, pressed for the full penalty, and the magistrates fined the defendant £20 and costs.

At the Wolverhampton Police Court, on December 23rd, James Blunn, Kent Street, Upper Gornal, was charged with selling margarine, not ticketed as such.—Mr. Van Tromp produced the analyst's certificate, which showed the sample contained 12 per cent. of butter.

Defendant said the label had been taken off by mistake.

The stipendiary said it was nothing more nor less than a fraud, and fined the defendant £3 and the costs (£1 is. 6d.).

WILLIAM RABJOHN, of 112, Devon's Road, Bromley, was summoned at Thames, on January 3rd, for selling butter adulterated with 63 per cent. of foreign fat.—Mr. Ricketts prosecuted on behalf of the Butter Association.—The case having been proved, Mr. Mead said that the defendant had committed a clear fraud, and fined him £18 and £2 costs, or twenty-one days' imprisonment.—James Lord, of 17, Devon's Road, Bromley, was also fined £18 and £2 costs; William Williams, 254, Devon's Road, £1 and 12s. 6d. costs; and Hannah Brown, 151, Whitehorse Street, Stepney, £3 and £1 3s. costs for like offences.—Messrs. Perks, Gunston, and Tee (Limited), of 6, Bayer Street, Golden Lane, City, were summoned for a similar offence, but on their application the case was adjourned for a sample to be analysed at Somerset House.—There was a similar summons against Henry Planner, of 86, Chrisp Street, Poplar, and that was also adjourned for evidence to be given to prove that the shop was the property of the defendant.

At Bolton, on December 29th, Thomas McGuirk, provision dealer, 13, Rushton Street, was charged with selling an article purporting to be butter, contrary to the provisions of the Food and Drugs Act, and for having had margarine not sufficiently labelled. The Town Clerk stated that on December 12th a girl went to the shop and purchased half a pound of butter. The article was paid for at the rate of a shilling per pound, and was found to contain 69 per cent. of fats foreign to butter. Mr. Horridge, who defended, urged that his client could not be regarded as tenant in this case, and should not be prosecuted. In support, he produced a document, by which defendant agreed to transfer the business to a Mr. Boote, subject to certain conditions. Mr. Winder (magistrates' clerk) examined the document, and advised the bench that, judging from the wording of it, McGuirk was responsible until the whole of the purchase money was paid. The magistrates

imposed a fine of 40s. and costs, thereupon Mr. Horridge gave notice of appeal. On the second charge, the contention was that the margarine was sold in mistake, and the case was dismissed, on payment of costs.

At Dukinfield, Fred. Hyde, grocer, was summoned for selling margarine which was not wrapped in a packet legibly marked "margarine." The evidence showed that when a person was sent to the shop by Mr. Lea, the inspector, she asked for $\frac{1}{2}$ lb. of tenpenny butter, and received margarine, the person in the shop telling her it was margarine. It was wrapped in a paper which apparently had no word printed on it. On holding the paper up to the light the word "margarine" could just be discerned, printed in lemon colour. A fine of 10s. and costs was imposed.

At Newcastle-on-Tyne, on December 30th, Geo. H. Davidson, margarine dealer, Heywood's Court, Cloth Market, Newcastle, was charged that he, being an importer of margarine, had offended against the Margarine Act, 1887, by having in his possession, for the purpose of sale, four half-hundredweight tubs of margarine, such tubs not being branded or durably marked "Margarine" on the top, bottom, and sides, in printed capital letters not less than three-quarters of an inch square. He was further charged with reference to seven baskets of margarine which, it was alleged, were not marked in accordance with the Act. Mr. Sanders (from the Town Clerk's office) prosecuted. Mr. E. Clark, who defended, admitted that the tubs were not marked, and pleaded guilty in respect to that charge. As to the baskets, it was a question whether the marking adopted by the shippers complied with the Act.—Mr. Sanders asked that the Bench should impose the full penalty if the charges were proved. This was one of the most serious sanitary offences brought into that court for some time. It was seldom that the Corporation was able to lay hold on wholesale dealers in such cases. The Corporation officials had been taking notice of Davidson, and on the day in question his men were actually found scraping off the brand on the tubs. Defendant was spoken to, and admitted that he had instructed them to do it. The penalty for infringing the Act in the manner alleged was £20. He understood that it would be argued that the words "branded" or "durably marked" would include what was done in respect of the baskets which bore the word "Margarine" on a tin label attached to them. That would be an easy way of trying to get out of the Act. He was told that the use of baskets was an innovation, with a view to making more profit, inasmuch as the baskets could be used again. It was an easy matter to durably mark a basket.—Inspector Wells stated that, whilst he was in Heywood's Court, he saw a young man busily engaged in removing the word "Margarine" from the top of a tub. He also saw a hand-barrow with several baskets and four tubs on it, and noticed that the tubs were not marked "margarine." He was told that they contained margarine, and took samples.—By Mr. Clark: Defendant said he dealt in margarine only. Witness did not know that there was any butter in the place. Defendant, by what he was doing, was not deceiving the purchaser, but was enabling the purchaser to deceive someone else. Witness searched the carriers' carts that day, and found some of the defendant's goods on one. There was no branding or durable marking. There were tin labels attached.—For the defence, Mr. Clark said he had ascertained that the tops were not marked, so that he was unable to raise the point he had intended raising. The Corporation was the mamma of the town. It had found a chance of going for someone, and had taken advantage of it in order to make up for its sleepiness in other matters. If that was the worst sanitary case that had come before the Bench for a long time, the city was not in a bad state after all. Defendant was virtually fighting the case of the baskets on behalf of the shippers. The baskets were sent out by the defendant as he received them. Defendant dealt in nothing but margarine, and there had been no attempt at fraud. As to the tubs, the offence was not so venial a matter. The brand was taken off to oblige a customer. He could devise a reason why the customer wanted to have it taken off, but he might give a wrong one.

The most that could be said was that the defendant got no profit by the taking off of the brand.—The Chairman said that had not been shown to be the case.—Mr. Clark concluded by remarking that it was a silly thing to take the brand off the barrels. Defendant had written to the Corporation, and undertook to sell no more margarine unless it was properly branded. There was no suggestion of fraud as to the baskets.—The Bench thought that there was fraud as to the four tubs, and imposed a fine of £20 and costs. As to the baskets, they were not durably marked, but as the offence was only a technical one a penalty of 10s. and costs would merely be imposed on that charge.

At Birmingham, Edwin Wall, 50, Bordesley Street, was summoned for selling butter containing 85 per cent. of foreign fat. Clara Birchenough said she bought a quarter of a pound of butter. There was no mark on the paper in which the butter was wrapped, or anything said about its being margarine. Inspector Jones said he saw a margarine label in another part of the shop, but nowhere near where the margarine was purchased from. Mr. Fisher said this was another case of fraud on the public, who asked for an honest article and got rubbish. No doubt in many shops, especially at this time of the year, there was too much of this rubbish being sold as a genuine article. If fines did not have any effect imprisonment would follow. That was the first time defendant had been before them, and it was fortunate for him. The fine would be one which he would remember. If people would make profits by selling a fraudulent article, the profits should be reduced as much as possible by fines in that court as well as by public exposure. Defendant was ordered to pay £5 and costs.

THE Water, Peace, and Safety Co-operative Society was summoned at Rawtenstall for selling butter containing 19.30 per cent. of water. For the defence it was argued that the butter was Irish and was sold in the same state as received, and that no offence against the statute had been committed. The case was adjourned for the attendance of the public analyst.

At Liverpool, Bernard Fitzsimmons, grocer, Window Lane, Garston, was fined 20s. and costs for selling margarine for butter, which was labelled "Finest Rose Kiel." It contained 25 per cent. of foreign fat. Inspector Parkinson proved the case.—Peter Shone, grocer, Vulcan Street, Garston, was fined 20s. and costs for selling unlabelled margarine.

THOMAS BROADHURST, 82, Orford Lane, was charged at the Warrington Borough Police Court, on December 26th, with selling to the prejudice of Ralph Inman, on November 23rd, a quantity of butter which was adulterated with 70 per cent. of foreign fat. He was further charged with exposing a quantity of margarine for sale without a label being attached to it. Inspector Numan stated that he went into the shop of the defendant and asked for a pound of butter. He paid 1s. for it, and then divided it into three parts, and told the defendant that he would submit it to the public analyst. The defendant then said that it was pure butter, as he never sold margarine. On submission to the public analyst it was shown that there was not a particle of butter in it, and that it was chiefly composed of foreign fat. The defendant upon being informed of the result of the analysis, said that the wholesale dealer who supplied the butter had promised to stand by him and pay whatever costs were imposed. Witness subsequently visited the shop of the wholesale dealer in question and bought some butter, but found that pure. The margarine in the shop of the defendant had no label to indicate that it was margarine.—The defendant was fined 40s. and costs on the first charge, and 20s. costs on the second.

At Fleetwood several cases under the Sale of Food and Drugs Act were brought before the bench by Inspector Parkinson, who is engaged by the Royal Lancashire Agricultural Society, in conjunction with the County Council. The first case heard was against William White, who was summoned for two offences. The inspector stated that he purchased 1lb. of butter at 10d., and he was proceeding to produce the public analyst's report when it transpired that he had not served the necessary notice regarding the pro-

duction of the analyst's report at the court upon the defendant. The case had to be adjourned, as defendant was not present to consent to the certificate being handed in.—Another case of a similar character was heard against Elizabeth Ann Whitehead, of Church Street, Fleetwood. The defendant's solicitor waived the objection to the notice of the analyst's report not having been served upon the defendant. The case was, therefore, heard, and the inspector proved purchasing 1lb. of butter, which contained 10 per cent. of water and upwards of 70 per cent. of foreign fat, other than butter. He stated that the quality of the alleged butter was only equal to margarine, the value of which was 4d. per lb. Mr. Barker, defendant's solicitor, cross-examined witness, who said that he could not tell, neither by look nor appearance, but what it was butter. He saw the invoice for the butter, which described it as the best Danish.—Defendant said she ordered it as the best Kiel butter, and the traveller, who said he represented the Yorkshire Dairy Company, on receiving payment of the account, had his attention called to his description of the butter, when he said the best Danish and the best Kiel were one and the same.—The defendant's solicitor contended that the conversation with the traveller, in conjunction with the description on the invoice, practically amounted to a warranty, and therefore defendant ought to be exempt from any action in the matter.—The Bench imposed a fine of 10s. and costs, and said that they were assured the defendant had been imposed upon, but she had her own remedy against those from whom she purchased.—Another case, against Nicholas Parkinson, grocer, of Fleetwood, was brought by the same inspector. Defendant, however, produced a proper warranty from the firm who supplied the butter, and the Bench had no alternative but to dismiss the case.

SNATCHING BUTTER FROM AN INSPECTOR.

At Bolton Police Court, on December 29th, a case was heard in which a local grocer and off-licence holder, named Richard Grundy, was charged with stealing half a pound of butter from Richard Spencer, an inspector under the Corporation. The prosecution was conducted by Mr. R. G. Hinnell, the Town Clerk, and Mr. Horridge defended.—Inspector Spencer sent a young woman to purchase half a pound of butter at defendant's shop in Virgil Street, on December 12th, and she immediately handed it over to that officer, who entered the shop. There he saw Grundy, and told him that the article had been obtained for the purposes of analysis. Thereupon defendant snatched the parcel from the inspector's hand and threw it on a fire, where it was quickly consumed by the flames. It was explained that the local authority had been obliged to proceed against Grundy on the charge of stealing the packet of butter, as there was no clause in the provisions of the Food and Drugs Act to cover his offence.—After the town clerk had finished his statement, and was proceeding to call evidence, Mr. Horridge asked for the indulgence of the Bench until he had had a conversation with the town clerk.—This was granted, and ultimately the case was withdrawn, it being understood that it will come up again in another form. Had the charge of felony been proved, and a conviction recorded, Mr. Grundy, being a licence holder, would have been placed in a serious position in regard to his licence.

GREGORY'S POWDER.

At Devizes George Thomas Summers, manager of the International Tea Company's branch at Devizes, was summoned by Mr. Frank Beardsley, inspector under the Food and Drugs Act, for selling as Gregory's powder an article which was not of the nature and substance demanded. Mr. Beardsley prosecuted on behalf of the Wilts County Council, and Mr. Beck, solicitor (London), defended. The charge was that, on October 20th, defendant sold to Arthur Latty, assistant to Beardsley, a bottle of Gregory's powder for 7d. A portion of the contents

was sent to Dr. Bernard Dyer, county analyst, for examination, and his certificate showed that, instead of oxide of magnesia being used as one of the constituents, carbonate of magnesia was used, which, according to the analyst's evidence, detracted by 50 per cent. from its potency and efficacy as a therapeutic agent. For the defence, Dr. Wellington Lake, of Guildford, was called, who deposed that in most of the public institutions of London, as well as almost universally on the Continent, carbonate was used in the compounding of Gregory's powder, instead of oxide, as it was more powerful and more effective. In his opinion the powder was worth more when made with the carbonate. The bench refused to entertain a point of law raised by the defence on a technical matter, and after some consultation in private said the law had been infringed, but it was not a serious case. They inflicted a fine of 1s. and 10s. 6d. court fees. There was no imputation of fraud against the defendant.

FOREIGN TOBACCO—A WARNING TO DEALERS.

At Hastings, a fortnight ago, Alfred John Bullock was summoned for selling Cavendish tobacco not properly labelled, and contrary to the Tobacco Act. He was further charged with having 10½ lbs. of the tobacco in his possession.

Mr. B. Hawkins (of Somerset House) appeared for the prosecution, Mr. C. Davenport Jones defending.

Opening the case, Mr. Hawkins explained the nature of the offence. Sweetened Cavendish tobacco was manufactured on the Continent, and as there was a demand for it in this country, extra duty was charged, and each packet required to be labelled with a Government wrapper. The duty was 3s. 10d. per lb., and defendant made a statement to the effect that he paid 3s. 3d. a lb. for it.

Detective-Inspector Llewellyn (Inland Revenue) said that on October 14th he paid a visit to the defendant's house, the "Castle Hotel," Bexhill. Witness purchased two cakes of tobacco, similar to those produced. A pound and a-half of the plugs were openly shown on the counter. He paid 4d. each for the plugs, but as he had to leave for the West Coast he gave the cakes over to Officer Dickens. The next day, witness, accompanied by other officers, made another visit to the place, making a search, and cautioning defendant. After some demur, he showed Officer Dickens 9 lbs. of cake tobacco, saying he had purchased it from Mr. Quilter, of Hastings, producing the invoice, which showed it was bought at 3s. 3d. per lb. Witness accompanied defendant to Hastings and saw Quilter, who admitted the sale. The duty alone on the tobacco would be 3s. 10d. per lb.

Cross-examined: He did not know that a firm supplied English cake-tobacco at 3s. 6d. per pound, and allowed a discount. There was no secrecy on the part of defendant.

Frederick Isaac Dickens, officer of Inland Revenue, deposed to seizing the tobacco and handing over samples to the Government analyst.

James Woodward, B.Sc. F.I.C., analyst (Somerset House), analysed the samples, which he said contained ten per cent. of liquorice. The English cake-tobacco was very different from the foreign, the former bending easily. Anyone having any dealings with tobacco knew the difference.

Mr. Jones, for the defence, pleaded that defendant was ignorant of the presence of liquorice in the tobacco. He paid a penny more for it than he could have obtained it for in London. Quilter was the real offender, and he had been punished by the magistrates.

Defendant, in his evidence, stated that he had done a lot of business with Quilter, sometimes paying him several pounds a month. He did not know a stamp was required, and thought the tobacco was the usual sort. Quilter told him that he had a good line in tobacco, and he ordered some.

Cross-examined: He had had nine public-houses in London, and had never had his place searched before. He

had never heard of tobacco containing liquorice. He could not recollect any printed warning being served on him.

The Bench imposed a fine of £1 and costs in each case (total, £4 3s.).

COFFEE.

At Birkenhead, on December 23rd, Amelia Stewart, of 32, Ball's Road East, was summoned for having sold coffee which was adulterated.—Evidence was given to the effect that some coffee was bought from defendant's shop, analysed, and found to contain 40 per cent. of chicory.—Defendant was fined 20s., including costs.—Andrew Kirk, of Collingwood Street, was summoned for having sold coffee which was not pure.—It was stated that a quantity of coffee had been bought at the defendant's shop, and analysed, and found to contain 30 per cent. of chicory.—A fine of 20s., including costs, was imposed.

At Birmingham John Woodward, Emily Street, was summoned for selling coffee containing 25 per cent. of chicory. Clara Birchenough said she bought a quarter of a pound of coffee, for which she paid 4d. She was served from a plain tin, and the coffee was wrapped in plain unmarked paper. Mrs. Woodward, who appeared for her husband, admitted that a mixture was sold in mistake for coffee, and said that she left her husband, who was eighty years of age, in charge of the shop, and he was responsible for the mistake. The magistrates said they thought it was a genuine mistake, and they would fine the defendant 5s. and costs.—Alfred Onions, Great King Street, was summoned for selling coffee containing 75 per cent. of chicory. Inspector Jones said the defendant told him that he purchased the article as pure coffee. The defendant produced an invoice from Messrs. Budgett & Co., wholesale tea and coffee merchants. The witness Birchenough stated, in reply to the Bench, that the package containing the coffee was opened in her presence. Jones examined the invoice, and said it appeared that coffee was supplied, but 9d. per pound was not a big price to pay for it. The defendant said Budgett's were a large firm, and he expected them to treat him honourably. He ordered coffee and expected to receive it. Mr. Parker said the defendant would not get coffee under 10d. per pound in the ordinary way. Mr. Fisher asked if the defendant had communicated with the firm from whom he bought the coffee, and the defendant replied in the negative, adding that Jones advised him not to do so for the present. Mr. Parker explained that the reason the inspector advised the defendant not to communicate with the wholesale dealers was that they wanted to have the decision of the bench upon the case first. If the magistrates made up their minds to fine the defendant, he could get at the wholesale dealers through the county court, and he (Mr. Parker) would help him to the best of his ability.—Mr. Fisher asked if some representative of Budgett and Co. could not be sent for to hear what was said about them, because they might have some explanation to make. The invoice said that coffee was supplied, but, according to the evidence of the inspector, it was a mixture. The defendant seemed hardly to have done wrong.—Mr. Parker asked for an adjournment, saying that he would communicate with Budgett and Co. in the meantime.—Mr. Fisher said the defendant seemed to have been honest in the transaction. The case was then adjourned for four weeks.—Edward Clay, Barr Street, was summoned for selling coffee containing 70 per cent. of chicory. In this case a quarter of a pound of coffee was asked for, and 3d. was paid for it. Defendant said he was ignorant of doing any harm. He bought it as coffee, and thought he ought to be allowed to sell it as coffee.—Mr. Fisher said this was another case of fraud on the public. People went into a shop and asked for coffee, and they expected to have it, and, in fact, must have it. Here it was not a question of half and half, but 70 per cent. of mixture. The defendant's excuse was that he sold it as he received it. He could not listen to any such story in the absence of evidence. The public were willing to pay for an honest article, and they should have it. The magistrates were determined to do all in their power to put down this fraudulent trading. Defendant was ordered to pay £5 and costs.

WEAK LIME-WATER.

ARTHUR E. FOSTER, who carries on a chemist's business at 96, Ball's Pond Road, Islington, was summoned at North London, on January 3rd, under the Adulteration of Food and Drugs Act, for selling lime-water which was 45 per cent. below the standard required by *The British Pharmacopœia*.—Mr. Bramall prosecuted for the Islington Vestry, and remarked that it was very necessary that lime-water sold by chemists should be up to the standard strength, as it was a very common remedy for a number of little ailments which might turn out seriously if not attended to.—Defendant pleaded guilty. He said his father had kept the shop, but was now dead. He (defendant) had been carrying on the business, so that his mother could sell it. He employed an assistant, who, however, was not qualified. He had not sold any poisonous drugs. He now meant to get a qualified assistant, and he would do all he could to ensure that all the drugs sold should be genuine.—Mr. Fordham said that the full penalty in this case was £20. The defendant would have to pay a fine of £3 and costs.

SUGAR.

GEORGE HERCOCK, grocer, Bengoe, was summoned at Hertford for selling sugar crystals, artificially dyed, as Demerara sugar.—Inspector Johnson stated that he sent a lad into the defendant's shop for a pound of Demerara sugar, and witness afterwards told defendant the object of the purchase. Defendant at once said a mistake had been made. The county analyst certified that the sample was not Demerara, but artificially coloured crystals.—Defendant said he remembered serving the lad with sugar, but could not be positive whether he asked for Demerara. He denied that he said he had given the boy a wrong package.—Johnson informed the Bench that there had been complaints all over the country as to inferior sugar being sold as Demerara.—The Bench ordered defendant to pay 15s. 6d., the court costs, and 10s. 6d., the analyst's fees.

IMPORTANT PROSECUTION OF VENDORS OF MEDICATED WINES.

At Blackwood Police Court, on December 30th, David Jenkin Morgan, grocer and provision dealer, Newtown, Cross Keys, was summoned by the Excise authorities for selling coca wine on the 13th of September, and Liebig's beef and malt wine on the 15th of the same month without having an excise licence. Defendant applied that the case should be adjourned, as his solicitor was unable to attend; but inasmuch as due notice had been given since the service of the summonses, the Bench decided that the case should be heard that day.—Mr. W. A. Madden, supervisor of Inland Revenue, Newport, stated that the proceedings were instituted under 23 and 24 Vic., c. 27, sec. 19, defendant holding no wine licence. Both wines, he pointed out, were not so medicated as to entitle the authorities to exercise their prerogative of indulgence and exempt these articles from wine licence duty.—John Frederick Last, officer of Inland Revenue, Crumlin, said that defendant had no licence in his name to sell wine. On September 13th he purchased coca wine from defendant personally, and on September 15th Liebig's beef and malt wine, being served on the latter occasion by an assistant. Defendant asked witness what was his object, and witness replied that it was to ascertain if the articles purchased were liable for wine licence duty. Samples were sealed and forwarded to the Government laboratory in London.—Thomas John Cheater, B.Sc., Government analyst, deposed that the coca wine was found to be in character a foreign wine medicated with coca, and contained 32.95 per cent. of proof spirit, usual in foreign wines. The sample did not contain enough cocaine and very little of the leaf to render it nauseous, and on that account alone it would not have been passed for exemption. With regard to Liebig's beef and malt wine there was 27.6 per cent. of proof spirit. There was no medicating ingredient in this, as beef was not recognised as a medicating agent according to the

regulations.—Defendant, sworn, deposed that he had been in business for ten years. He bought some dozen bottles of the wines from a Wolverhampton firm, whose representative gave him to understand that no licence was necessary. He had since received a letter from the manufacturers, in which they stated they had never known of such a case, and these wines were sold to agents throughout the valleys.—The Clerk (Mr. E. H. Davies) remarked that under such circumstances wholesale firms concerned were usually represented.—Mr. Madden said that the wholesale traders had inquired if their label was upon the bottles, and he was afraid they knew they had done wrong.—Mr. T. P. White, J.P., remarked that it was rather hard upon tradesmen like defendant that they should be put to such expense in this way. The Bench imposed a fine of £5, including costs, in each case.

FIGS.

MR. BULLOCKS, sanitary inspector to the Poplar Board of Works, while inspecting the shops and stalls in Crisp Street Market, noticed a barrow loaded with 2½ cwt. of figs, which were exposed for sale. A quantity of the fruit was in boxes, while the remainder was loose. These were being sold at a penny a bag, while twopence was asked for each box. The inspector on examining the figs found them to be in a rotten and fermented condition, very maggoty, and swarming with animalcules. He seized the whole of them, and now with Dr. Alexander, the medical officer of health, brought them to the court.—The magistrate, after examining the figs, said he had never before seen such a bad lot, and had no hesitation in condemning them. He also commented on the serious effects which might follow if they were eaten by children.—It was mentioned that on the appearance of the inspector the owner of the barrow quickly and mysteriously disappeared.

POISONED BY TINNED BEEF.

MR. GEORGE E. HILLEARY, the West Ham coroner, held an inquiry at the Canning Town Coroner's Court, on December 27th, into the circumstances attending the death of Maud Cox, aged three and a half years, the daughter of a labourer residing at 16, Scott Street, Canning Town, who died from ptomaine poisoning.—Emily Cox, the mother, said the deceased had always been a strong child. On Friday last she slightly burnt her arm whilst playing with the fire. On Saturday for dinner the deceased had some tinned beef. Shortly afterwards she was sick.—The Coroner: Did any other members of the family have any of the beef?—The Witness: Yes, we all had some, but none of us felt any ill effects.—The Coroner: Did the deceased eat anything else which would be likely to upset her?—The Witness: She bought some white sweetstuff mice with red paint on.—The witness, continuing, said that in the afternoon she went to her sister's to spend Christmas, when the deceased was attacked with severe vomiting and diarrhoea. She appeared very ill, so the witness took her to the St. Mary's Hospital.—Dr. William Walter Farnfield, resident medical officer of the St. Mary's Hospital, Plaistow, deposed that the deceased was admitted on Christmas Day in a collapsed and pulseless condition, and died two hours later. The witness concluded that the deceased was suffering from some irritant poison. He had since made a post-mortem examination, and found all the organs congested, following absorption of poisonous matter. There was irritation of the stomach and intestines. The cause of death was ptomaine poisoning, the result most probably of eating some unwholesome article of diet. The witness was of opinion that it was due to the corned beef.—The jury returned a verdict of "Death from misadventure."

A PUBLICAN'S NOVEL ADULTERATION NOTICE.

A COUNTRY public-house in Gloucestershire has a notice hung up, reading, "All spirits sold are adulterated with as much water as is possible to evade the law."—*The Buxton Herald and Visitors' Gazette*, December 28th, 1898.

THE SANITARY INSPECTORS' ASSOCIATION.

A GENERAL MEETING of the members of the Sanitary Inspectors' Association will be held at Carpenters' Hall, London Wall, E.C., on Saturday, January 7th, 1899, at 6 p.m., when the following business will be considered:

1. Minutes of the previous General Meeting.
2. Election of Members and Associates.
3. The President's (Sir John Hutton, L.C.C., J.P.) "New Year's" Address.
4. General business; after which the usual Members' Conference will be held.

TYPHOID AT NICE.

A CORRESPONDENT writes: "It is notorious here—withstanding that every effort is made by the local authorities, hotel-keepers, and others having interests in the place, to veil the truth—that typhoid fever in a bad form has been terribly prevalent in Nice for the last three months, and still continues so. The causes are not far to seek: (1) A failure of the water supply, owing to the prolonged drought of the early autumn; and (2) Defective drainage and sanitary arrangements generally, with the exception of a few of the most modern and most expensive hotels.

"Intending English-speaking visitors would do well to re-consider their intention to visit Nice this season, not only on account of its dangerously insanitary condition, but also on account of the strong Anglophobe feeling developed in the place since our recent strained relations with the French Government. I have personally witnessed several instances of marked discourtesy shown to English-speaking visitors as such, with remarks in the streets such as '*sales Anglais*,' etc. This was recently brought to notice in the *New York Herald* (Paris edition), the statements in which were certainly not exaggerated. (I have advisedly used the expression English-speaking visitors, as Americans are, of course, liable to be mistaken for English.)

"It is sufficient to read the local papers for proof of the fact that this feeling really exists. The *Petit Niçois* recently published a diatribe about 'Perfidious Albion' which would almost put to the blush *La Patrie* (of Paris)."

HER MAJESTY'S BUTCHERS AT WINDSOR ABUSE HER MAJESTY'S CONFIDENCE.

A VERY unpleasant surprise has been given to the butchers who supply the meat which is given by Her Majesty to the poor of Windsor. The Dean of Windsor, the vicar, and one or two other gentlemen were commissioned to inspect it, and promptly condemned several pieces as unfit to be the gift of the Queen. It is a very shameful thing that Her Majesty's generosity should have been abused in this fashion, as instead of prime joints contracted for, scrag-ends, bits, and inferior meat were being palmed off upon the poor at first-class prices.

THE WORCESTERSHIRE MEDICAL OFFICER'S COW.

SIR DOUGLAS GALTON, a veteran apostle of hygiene, recently announced to the Worcestershire County Council that a "friend," who had only one cow, had had the beast tested, and had found it a victim to the insidious disease of tuberculosis. That "friend," it is understood, is none other than the Medical Officer for the County. Dr. Fosbrooke keeps a cow for his domestic supply, and in anxiety to satisfy himself that the animal was free from disease, injected tuberculin, the only index method of treatment. This produced symptoms of tuberculosis. The Medical Officer was alarmed. The dread was that he and his family had been absorbing, in their milk, the disease germs of the cow, and that they were all hurrying to an early grave. The family resigned themselves to their inevitable fate: but while the summary end of the cow was in contemplation its milk was analysed. That was found to be free from tubercle, and hope rose in the Fosbrooke family circle. The analysis upsets the deductions from the tuberculin treatment—that is the worst of cock-sure scientific theories—but it is a consolation to Dr. Fosbrooke.—*Berrow's Worcester Journal*.

DUBLIN WORKHOUSE MILK.

THE South Dublin Union have received a report as to the quality of the milk that had been supplied to the house by the contractors. From this it appeared that according to Sir Charles Cameron's analysis in the case of John Wisely, of 10, Cole's lane, there had been adulteration with water of 26 per cent., and in the case of James Melia, of 46, Prussia street, adulteration of 14 per cent.

On the motion of Mr. Byrne, it was resolved that Messrs. Wisely and Melia be reported to the Board's solicitor with a view to prosecution.

Having disposed of the ordinary business, the Board adjourned.

"THE GLOBE" ON TRICKS OF THE SPICE TRADE.

ALTHOUGH the more romantic side of the spice trade (says *The Globe* on December 22nd) is referable to a bygone time, it is not without its pleasant fictions at the present day. The piquant flavour of spices depends upon a volatile essential oil which readily diffuses itself through any less pungent commodity with which it is brought into contact. Hence it follows that the adulteration of spices is both easy and profitable. It is possible, indeed, to manufacture "ground spices" without any admixture of real spice whatever; and as mills exist for the express purpose, it cannot be doubted that such a form of enterprise is in active existence. Ginger is "made" from various corn meals, from ship-biscuit, turmeric, and cayenne. Pepper is turned out which consists exclusively of gypsum, mustard-husks, cereal starch, linseed-meal, and powdered capsicums. Cloves are ground up with 50 per cent. of charred walnut-shells; while the bulk of cinnamon is increased by admixture with cocoanut shells. In all these cases a judicious *soupeçon* of cayenne is added to supply the lack of pungency in the adulterants. Thus are compounded those gay deceivers the "spice mixtures"; which, masquerading as a "term of art," are ever in waiting to beguile the unwary. Of course the purchaser has no right to expect what in point of fact is not bargained for; but this is but a barren form of *ex post facto* comfort. And if, looking askant at these preparations, the mistress of the house betakes herself to the search for the genuine article, she is fortunate if she succeeds in obtaining its plausible similitude. For modern ingenuity is able to extract a portion of their essential oils without injury to the corporeal integrity of the spices that yield them. These are often "sweated," or otherwise exhausted of their more active properties. And thus it happens that the flavour of a sample of undoubted quality, procured for once in a way from a questionable source, comes almost as a revelation to most of us.

There are, as our readers know, many tricks in the spent ginger and spice trades, but *The Globe* rather exaggerates them.

BUTCHERS AND TUBERCULOSIS.

A REPRESENTATIVE meeting of butchers, farmers, and auctioneers was held at Perth on Dec. 23rd, to consider the loss sustained by cattle being condemned for tuberculosis, and to make arrangements thereanent. Mr Alex. Hay (of Messrs. Hay and Co., auctioneers), presided, and the audience included representatives of the other auctioneering firms in the city, farmers in the various parts of the county, as well as butchers in Perth and Perthshire. The Chairman said he had been in communication with the Perth Butchers' Association, and that body recommended that an insurance scheme should be entered into, and that buyers and sellers should each pay 6d. a head for bullocks and heifers. The scheme at present was not proposed to extend to bulls and cows. Mr. W. S. Ferguson, Pictston-hill, moved the adoption of the proposed scheme, and a committee, consisting of farmers, butchers, and auctioneers, was appointed to carry it into effect.

This is a protective measure worthy of adoption in other parts of the kingdom.

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Food and Sanitation.

SATURDAY, JANUARY 14TH, 1899.

SPECIAL NOTICE.

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HEREFORDSHIRE AND ADULTERATION.

DISGRACEFUL STATE OF THE COUNTY.

THE report of the county analyst, Mr. E. W. Voelcker, was in the following terms:

I beg to hand you my report upon the samples taken under the above Act and submitted to me as public analyst for the county of Hereford during the year 1898:

- 1.—Milk: Poor quality.
- 2.—Butter: Contained boracic preservatives.
- 3.—Butter: Ditto.
- 4.—Butter: Ditto.
- 5.—Beer: Genuine.
- 6.—Whisky: 27.6 under proof.
- 7.—Butter: Genuine.
- 8.—Lard: Genuine.

The total number of samples sent during the entire twelve months has, accordingly, been eight only. Of these eight, five (or 63 per cent.) proved more or less unsatisfactory, three samples of butter containing boracic preservatives, the one sample of milk being of poor quality, and the one of whisky being 2.6 degrees below the minimum strength allowed under the Act.

This being the record of the year as regards the few samples submitted it may be not unreasonably concluded that inferiority of quality and adulteration of articles of food may in all probability exist to a considerable extent throughout the county.

So long as such utterly inadequate checks are put upon adulteration direct encouragement to the dishonest trader and injustice to the honest one must be the outcome of the action of the county authorities in allowing the Sale of Food and Drugs Act to become practically a dead letter.—Yours faithfully.

The Chairman stated that neither he nor the Standing Joint Committee agreed with the Analyst's strictures contained in the report. The Chief Constable had discretion to take a sufficient number of samples year by year and quarter by quarter, and if there was anything like a complaint as to adulteration in the county there was not the slightest doubt proceedings would be taken. There was no cause whatever for the strictures so far as he had heard, and the Chief Constable's report showed that out of four samples taken under the Food and Drugs Act there was only one certificate of adulteration, when the person, who had adulterated whisky, was prosecuted and fined £1 and costs. The Chief Constable's attention had been drawn to this matter, and there did not appear to be the slightest ground for the strictures.

We think Sir R. Harrington and his colleagues will be alone in their belief. Such a state of things as Dr. Voelcker's report discloses is a direct incentive to fraud, and a gross injustice to English agriculture. It is a grave scandal that one year's samples should be only eight for the county; whilst in the City of Hereford no less than sixty-four samples were analysed, of which six were adulterated. The samples taken for the city by P.C. Ovens were ten, and by Sanitary Inspector Protheroe fifty-four, comprising: milk, 21; butter, 13; lard, 3; coffee, 2; pepper, 2; mustard, 2; ground ginger, 1; ground cinnamon, 1; flour, 1; tincture of iodine, 3; tincture of rhubarb, 2; compound tincture of camphor, 1; milk of sulphur, 1; whisky, 5; gin, 4; brandy, 1; rum, 1.

The extent of adulteration in the City during 1898 was as follows:

MILK.—1 Sample was deficient of 25 per cent. of cream.

TINCTURE OF IODINE.—1 Sample was slightly deficient in iodine. 1 Sample contained 27 per cent. of its chief constituent, iodine in excess, according to the proportions laid down in the "British Pharmacopœia."

WHISKY.—1 Sample was 28.96 degrees under proof. 1 Sample was 37.91 degrees under proof.

BRANDY.—1 Sample was 39.1 degrees under proof. (25 degrees under proof is the minimum strength allowed by the Act for the above spirit.

GIN.—1 Sample was 37 degrees under proof. (35 degrees under proof is the minimum strength allowed by the Act for the above spirit.

The results disclosed in Hereford city afford the most striking condemnation of the attitude of Sir Richard Harrington and his colleagues, and thoroughly justify Dr. Voelcker's strictures. It is ridiculous to suppose that traders in the county who never have samples taken for

analysis are more honest than those in the city who are regularly visited by the Sanitary Inspector. This is a question deserving the prompt attention of agriculturists and the county press.

WATER AT SPIRIT PRICES.

At Mistley Petty Sessions, on January 9th, Henry Leaver, landlord of the "King's Head," Manningtree, was charged with illegally selling adulterated gin.—Mr. L. Thompson Smith appeared on behalf of the defence.—Police-Sergeant Bridge, inspector under the Food and Drugs Act, said that about one o'clock on Saturday, November 10th, he asked the defendant to supply him with half a pint of gin. Witness was in plain clothes. When the gin was supplied, he said that he would have another half a pint out of the same vessel. Witness asked the price, and defendant said 1s 8d., which was paid. After this witness told defendant that he had purchased the gin for analysis by the Public Analyst. Witness asked for a jug, and eventually divided the liquor into three equal divisions, and sealed the bottles in which it was poured, in the presence of the defendant. The latter did not draw his attention to the fact that the stuff was diluted, and he saw no notice to that effect. One portion he left with the defendant. On the 21st he handed another portion to an analyst in London; the remaining portion he produced in Court. The report of the analyst showed that the spirit was only 56 per cent.—that is 44 per cent. under proof, thus making it nine degrees under the limit allowed by the amended Act.

By Mr. Thompson Smith: Witness did not see any notice placed adjacent to the gin vessel.

Mr. Smith produced a notice, stating that all spirits sold were diluted with water. The placard produced was in very small type, and it was impossible to read it at any distance.

In reply to further questions, the witness did not deny that the notices were there; he simply said he did not see them.

Inspector Burrell said that while serving the summons he specially looked for a notice, which he found hanging up in a frame. It was in the public portion of the house, but was in a dark portion of the room. Witness could not see any notice near the bottles of spirits. He had gone on purpose to see if there were any notices exhibited, but he did not see any close to the spirits, although he was not prepared to swear that there was not one there.

In defence, Mr. Smith said that for four years, during which defendant had tenanted the house, he had never, up to that day, had the slightest complaint made against him. No customer had ever complained of the quality of the spirits used at the house. Defendant had diluted the spirits himself according to law, as he thought, with a fair amount of water. He did not think there was any great anxiety shown by the inspector to see the notices. Defendant was a man of irreproachable character. Mr. Smith quoted several decisions in favour of defendant.

Defendant said there had never been any complaint against him during his tenancy. Both notices were hanging in the bar on the date that the inspector visited the house; he had witnesses to confirm his statement.

Charles Parker deposed that he had often seen the notice near the spirit bottles, and also the other card in the frame. He had frequented the house for about 30 years, and had seen the framed notice in the previous landlord's time.

The Bench retired for consideration, and, on returning, the Chairman said that the case was dismissed on payment of costs, but they considered that in future the defendant should show a much more conspicuous notice.

At Hereford, on January 2nd, Annie Gibbs, landlady of the "Golden Cross" Inn, Maylord Street, was summoned, at the instance of Sidney Protheroe, Inspector of Nuisances, for selling whisky to the prejudice of the informant, which was not the nature, substance, and quality demanded by him, on December 1st.

Mr. Garrold prosecuted and Mr. A. J. Corner defended.

Mr. A. J. Corner intimated to the Bench that he proposed to plead guilty, and explained the circumstances under which the case arose.

Sidney Protheroe stated that on December 1st he visited defendant's house in Maylord Street and called for half a pint of Scotch whisky, which was supplied to him. He then informed the person serving him that he had bought it for the purpose of analysis. He divided the whisky into three portions; one he gave to defendant, another he forwarded to the Public Analyst, Dr. Bostock Hill, and the third he produced that day in Court.

The certificate of the Analyst showed that the whisky was 37·91 under proof.

Mr. A. J. Corner, in addressing the Bench, said that Miss Gibbs had kept the "Golden Cross" Inn for about thirteen or fourteen years, and had always sold very good stuff. On the 30th of November she ran short of whisky, and sent to Messrs. Gurney and Son for some. The whisky was brought back to her and she sold it in exactly the same state as she received it. After she found that the inspector had bought the whisky for the purposes of analysis she discovered from the label on the bottle that it was 33 degrees below proof. Defendant had not previously looked at the bottle as she had reason to believe she would not buy any spirits from Messrs. Gurney and Son which did not come up to the requirements of the Act of Parliament.

The defendant bore out Mr. Corner's statement, and produced the bottle containing the whisky. The label had on it in small letters "33 under proof." When she received the bottle she did not know it was under proof whisky. It had not been diluted with water to her knowledge. She paid 2s. 8d. for it. The inspector paid her 1s. for the half pint. She did not know what the strength of the whisky was.

The Chairman: Did you not read the label?—Witness: No.

Mr. Garrold: Ignorance is no excuse under the Act.

The Chairman: We have determined to convict, but what the conviction will be we will say presently.

THOMAS HILL, landlord of the "Kerry Arms" Hotel, Commercial Street, was summoned for a similar offence in respect to brandy.

The same advocates again appeared.

Mr. Garrold stated this was a case against a very respectable trader in the city, but proceedings were obliged to be taken in order that the Act might be enforced. Samples were taken on the same day as in the other case, by Mr. Protheroe and P.C. Owen, and the Public Analyst found that the brandy was 39·1 under proof.

After Mr. Protheroe's evidence, which was in accordance with Mr. Garrold's statement, Mr. A. J. Corner said that the incident took place under circumstances which would show defendant was blameless in the matter. Defendant, who carried on a large business at the "Kerry Arms" Hotel, in October last bought two casks of brandy. Inn keepers and hotel proprietors bought their spirits with the intention of diluting them, and one of these casks was proof brandy, and the other cask was 14 under proof. Defendant went into the cellar the other day—he generally drew a quart or two at a time and put it into bottles—and got some brandy out of the cask which he believed contained the proof brandy. Defendant had not the remotest idea until the inspector came what he had done, but he then found out that he had diluted in one bottle only the spirit which had already been 14 under proof when he bought it.

The Bench retired to consider their decision. Upon their return the Chairman, dealing with the case of Miss Gibbs first announced that the Bench had unanimously determined to impose a penalty of £1 and costs 19s. They were satisfied there was no intention on her part to adulterate the whisky. Had it been otherwise, the fine would have been heavier as the public must be protected. In regard to the case of Mr. Hill, the Bench adopted the same view. They believed he had made a mistake, but he should be more careful. Of course they all knew Mr.

Hill to be a respectable citizen, but the magistrates could not make any distinction between one person and another. They fined him £1 and costs 18s.

At Tregony Petty Sessions on January 2nd, Louisa Fleetwood, of the "Ship and Castle," St. Mawes, was fined 15s. and costs (including analyst's fee, 10s. 6d.) for selling adulterated whisky, to which she pleaded guilty. The whisky had been brought down by the addition of water to 30·84 degrees under proof.

IMPORTANT DISEASED MEAT APPEAL.

At Southampton Borough Quarter Sessions, on January 5th, an appeal by A. Treloggan, trading as Osman Bros., of East Street, against a conviction of the Southampton magistrates for having upon the above-mentioned premises eight pieces of pork of unsound quality for which he was fined the sum of £20 for each piece—£160 in all—and 10s. costs, in default three months' imprisonment, was heard. The appellant was represented by Mr. J. H. Tickell and Mr. C. T. Giles, M.P. (instructed by Mr. Lamport), whilst Mr. S. H. Emanuel and Mr. A. Willis Bassett (instructed by the Town Clerk) appeared on behalf of the respondents.

Mr. Tickell, at the commencement of the case, stated that he had a technical objection to raise to the conviction which took place under the Public Health Act of 1875. He contended that the borough magistrates when they had the case before them could only convict the appellant in one case, and not eight separate cases with respect to the first charge. He produced the various Acts in support of his contention, and remarked that if the magistrates were in order in making eight different fines for one offence, the appellant would, therefore, be subject to two years imprisonment in default. From time immemorial it had always been held that a conviction must be for one offence, and for one offence only, therefore the conviction in the present case must be bad. Therefore, under the circumstances, the fine should have been simply £20 and 10s. costs, in default three months' imprisonment. He thought the decision of the magistrates was absurd, and asked that the conviction should be quashed as it was a bad one.

Mr. C. T. Giles also spoke to the same effect, and drew special attention to the point put forward by Mr. Tickell that only one conviction could result and one fine, and not eight separate fines in one conviction.

Mr. S. H. Emanuel said that the conviction was perfectly in order, and stated that the arguments put against him were wild. He would like to call the attention of the Court to the fact that in the Act referring to the matter it stated that a fine of £20 could be inflicted for every piece of meat, and not for every offence. Therefore, it would appear from the first that that being the case, the conviction was perfectly good. Mr. Tickell had also told them that the conviction was bad because it showed an alternative offence, but he (Mr. Tickell) would pass over that. He, however, should like to say that this was not an alternative offence. Mr. Emanuel then called the Recorder's attention to the wording of the statute, which stated that the offence was for depositing, and that was the offence charged in this case.

Mr. Tickell, in reply, stated that it was absurd to say that the conviction was good, as there was one offence and no less than eight different penalties inflicted for this very offence. They had it from Justice Miller, in very plain words, that each piece of meat should be the subject of a separate charge, and yet the penalties inflicted for the one charge numbered eight.

The Recorder, at this stage, however, said the offence was for depositing the meat, and that was the offence charged. Special provision was made for the number of pieces of meat, and it clearly stated that for each separate piece of meat a fine of £20 could be imposed.

Mr. Tickell asked for a case to be stated, an application which was granted.

Mr. S. H. Emanuel then proceeded to narrate the facts of the case. He, however, drew attention to the fact that when the meat was seized by the inspector the sausage machine had apparently been recently used, and upon the table were six pieces of meat, which would presumably have been made into sausages, in addition to the other bad meat. Mr. Treloggan said that the meat was perfectly good, and yet when he sent for an expert the meat was declared bad, although an opinion was given to the effect that if the outside was cut off the inside would be sweet. The meat was afterwards destroyed. After that Mr. Treloggan destroyed no less than 140 other pieces of meat. That was a fact, he thought, worthy of their consideration, as it might be presumed that they would have been made into sausages.

Inspector Amor then gave evidence to the same effect as on the occasion of the first hearing, and was examined at length by Mr. Bassett and cross-examined by Mr. Tickell.

Inspector A. Hennen was then called, and gave similar evidence.

Dr. A. W. Harris, Medical Officer of Health, spoke to the condition of the meat, which would have been poisonous. This witness was also cross-examined by Mr. Tickell at length.

Alderman Bone, J.P., gave evidence to having condemned the meat, which was rotten.

Mr. W. Burrough Hill, jun., was the last witness, and gave evidence as to the ownership of the premises on which the meat was found.

Mr. Tickell then addressed the Court on behalf of the appellant, and said that the appellant could go in the box and give evidence. That evidence would have to be believed, unless it was contradicted or proved by cross-examination to be wrong or unreliable. He then went on to state that when the case was before the magistrates some time since, the whole element of the criminal case was omitted. It was a simple charge of having deposited unsound meat, and it was not alleged that this unsound meat was for sale or for preparation for the food of man. The most essential point that it was for sale was not before the magistrates at all in the summons, and he thought it was worthy of mention that that point was not raised until the solicitor for the defence mentioned it. The defence there that day was that the meat was never intended to be prepared or used for food of man. Mr. Treloggan had two premises in the town, and could not be at more than one place at a time. He, however, had competent servants, and it was most important to observe that he did not know that there was any bad meat upon the premises. He was not going to raise any point as to guilty knowledge or anything of the kind, but would content himself by urging that one transaction should have sufficed. It was important, he thought, that he should consider the amount of penalty. The whole case resolved itself into the facts that the meat was never intended by him for the preparation of the food of man, and, secondly, that if that were so, and if he was guilty of any offence, he contended that the penalty was most excessive. He contended that the amount which should have been inflicted as a penalty was £20.

The Recorder drew Mr. Tickell's attention to the words of the statute, which said that every carcase, fish, or piece of meat would be subject to a penalty of £20 when seized and found to be unfit for food.

Mr. Tickell said that surely some limitation should be made in the words of the statute. Supposing a man had a carcase seized, and was fined £20, the proper fine. That would be proper, but then again, supposing that the pig was not seized until two days afterwards, when it had been cut up into a great many chops, or made into sausage meat, was he to be fined £20 for every sausage or pork chop that was cut up? It seemed to him to be monstrous, and urged the penalty should have been £20 in all. If the magistrates wanted £160 they should have had eight different informations and the same number of convictions. Mr. Tickell then went on to state that there was a great deal of prejudice in this case, as it had been assumed that the meat

would have been used for sausages, and that the 140lbs. of meat that had been destroyed was all bad. What was really the case was that the two cheeks, which were not properly cleaned, were thrown into some brine, in which the meat was, and that turned it bad. In conclusion, it was urged that some limitation must be made, and that the words in the statute meant large joints, not small pieces of meat.

Mr. A. Treloggan, the appellant, then went into the box and gave evidence, at the instance of Mr. Giles, to the effect that he did not know anything about the meat in question from personal knowledge. He said that he had known a living animal, which had been killed in the evening, turn green by the next morning. The cause of the meat turning bad in the tub was because the pig's cheeks were thrown into the brine with the brains in. It was well known that brains decomposed very quickly, and it was against all orders that such a thing was done.—By Mr. Emanuel: He had seen several cases where the living beast had turned green the night after it had been killed. He did not see the meat in question, but thought that the meat was in good condition, as it was chilled and would last longer.—By Mr. Tickell: The meat would have been thrown away if, after being examined, it was found to be bad.

Mr. A. E. Cook, manager of a pork butcher's shop in East Street, said that he was called to Mr. Treloggan's shop, where he saw the previous witnesses. The appellant asked him to try the meat. He did so with a skewer, and pronounced one piece to be bad, and another not so bad. The interior of two pieces out of the six in question could have been saved by trimming. It was quite possible for the meat to go bad in one night.

This concluded the evidence, and Mr. Giles, in summing up, protested against the prejudice shown in conducting the case. With reference to the meat in the tub, he quite agreed that the cause of the contamination was that the head was placed in the brine with brains, and he pointed out that the appellant knew nothing about it. He contended that the meat was in the back of the premises because there was no other place to put it. That, however, did not prove they were to be placed there as fit to be used as food for man. Anyhow, from the evidence of Mr. Cook, there was some of it good. The meat had been sent from the shop to be examined and trimmed. Neither the one or the other had been done, and it was only fair to assume that the meat immediately it had been examined would have been thrown away as unfit for food. Then, again, there was sausage meat on the premises. The sausages made had not been condemned, and it was certain that the condemned meat would not have been used for that purpose. Then, again, the Inspector had said that the six pieces of pork were part of a griskin, and he thought that one penalty should be inflicted for the six pieces of meat. The penalties which had been inflicted should be mitigated, as he thought there was some vindictiveness shown in imposing the full penalties in so many cases. Mr. Giles then went on to speak of the Act referred to by the Recorder, which stated that for each piece a fine of £20 could be inflicted, and said that in the first portion of that section the words "piece of meat" were not used, but the word "meat" was used merely as a distinction from a carcase. In concluding, Mr. Giles asked the Recorder to take into consideration the fact that the appellant had no personal knowledge of the state of the meat.

Mr. S. H. Emanuel then addressed the Recorder, who, after consultation with the Clerk of the Peace (Mr. Page), said that he would support the conviction.

Mr. F. L. Bell, Chief Inspector of Nuisances at Portsmouth, was then called, and proved a previous conviction against the appellant at Portsmouth, and Mr. H. Prewett, assistant to Mr. G. F. Bassett (magistrates' clerk), proved a previous conviction at Southampton, the fines amounting together to £37.

The Recorder then gave judgment. He said he had carefully considered the case, and everything that could be put forward by the advocates on either side had been put

very ably. He considered the question he had to decide was whether the defendant had exposed or deposited meat which was not fit, etc. He thought there could not possibly be a doubt but that the meat was there for the purpose of preparation for sale, and, taking the evidence of Mr. Cook, the meat, or the greater part of it, was bad, as out of the whole only about 3 lbs. were reclaimable. The case, therefore, resolved itself into a question of punishment, and, according to the Act, he was liable to the penalty of £20 for each piece of meat. He had, before the previous convictions had been brought before him, been ready to have dealt with the case as only two convictions, but, seeing that he had been convicted for similar offences in July and October, he did not think that would have met the case, which was one of the worst. The appellant was absolutely reckless with regard to the injury to other people, in that had the meat been made into sausages any amount of illness might have been spread, and even more serious consequences might have ensued. The appellant's advocate had said that the rate the fines had been increased, from 10s. a piece to £1 a piece, and thence to the maximum, was rapid, and he would admit that, but then, on the other hand, the convictions of the appellant had also been rapid. He therefore thought that the magistrates were perfectly in order in their decision, which he would uphold, with costs.

There were some signs of cheering in the Court at the remarks of the Recorder, but these were instantly suppressed.

Mr. Tickell asked the Recorder to grant him a case upon the ground that the conviction was one offence, and that only one fine should be inflicted.

The Recorder granted the request, but refused a similar request from Mr. Giles with reference to the production of Inspector Amor's certificate at the first hearing.

The Court was then adjourned till March 20th.

UN SOUND MEAT IN NEWCASTLE

At the Newcastle Police Court, on January 6th, George Seeber was charged, under Section 117 of the Public Health Act, with being the owner of four quarters of beef affected with tuberculosis, which were deposited for sale at his slaughter-house in Stepney Lane, and further with exposing for sale one cow's head and three pieces of suet which were similarly affected, at his shop, 20, Gibson Street, on December 14th.

Mr. Sanders (from the Town Clerk's office) prosecuted, and Mr. E. Clark defended.

Mr. Sanders stated that, on December 14th, Inspector Dodds saw the meat being carted through the streets. He noticed at a glance that it was affected with tuberculosis. He followed it to defendant's shop. Here he pointed out its condition to defendant, and ordered it to be sent back to the slaughter-house, where it was seen by Inspector Hedley and Dr. Armstrong, and subsequently destroyed. He found that the head and suet belonging to the deceased animal were hanging in the defendant's shop.

Inspector Hedley deposed that the meat was affected with tuberculosis matter, and was quite unfit for food. Part of the tubercle had been removed.

In reply to Mr. Clark, witness stated that defendant admitted that the animal was killed by his son, and that he had not had an opportunity of examining the carcase. The cow was fairly well nourished, and had apparently been bought in a fair market. It was often difficult to tell the animals were affected with disease until they were killed.

Inspector Dodd having corroborated,

Mr. Sanders mentioned that he would have called Dr. Henry Armstrong, Medical Officer of Health, but for that gentleman's bereavement.

For the defence, Mr. Clark contended that the meat which was referred to in the first charge had not been deposited for sale, inasmuch as it had never left the cart. The fact that a respectable tradesman had, unconsciously, in his possession some meat affected with tubercular disease

was no offence. As to the second charge, the magistrates must give defendant credit of admitting at once that the head and suet belonged to the same carcase as did the quarters.

The magistrates considered the case clearly proved, and fined defendant £5 and costs in the first case, and £1 and costs in the second. They complimented Inspector Dodds upon his quickness in detecting the unsoundness of the meat. They also expressed their sympathy with Dr. Armstrong in his bereavement.

John Bousfield, a cattle dealer, hailing from Kirkby Stephen, was then charged with exposing for sale four quarters of unsound beef at Mr. Tindall's cattle mart on November 21st.

Mr. Sanders remarked that it was unfortunate that Newcastle, from the size of its cattle market, should be burdened with undue responsibility in the matter of preventing unsound meat reaching the public. In this instance, Inspector Hedley found in the mart four quarters of beef which the defendant had sent in. This meat was afterwards destroyed by order of the magistrates. Defendant stated that he killed the animal because it had fallen ill, but he labelled it "for inspection" when he sent it to Newcastle. That fact, Mr. Sanders concluded, did not excuse him, for the meat was hung up for sale, and defendant was responsible.

Inspector Hedley stated that his attention was called to the meat by its dark and bad condition generally. The animal had been diseased with pleurisy.

Defendant urged that the dealers, on seeing the label, would reserve the meat for inspection. The cow had been off her feed only a few days.

A fine of £5 and costs was inflicted.

MEAT.

At Marylebone on January 6th, John Butterworth, living at Acton, and Thomas Sharp, of Calverley Street, Notting Hill, were summoned by the Paddington Vestry for selling bacon which was diseased, unsound, unwholesome, or unfit for human food.—Mr. Dennis, for Mr. Hortin, solicitor, was for the prosecution.—Mrs. Mabel Roberts, then living at Portnal Road, St. Peter's Park, purchased some bacon of the defendants, who were selling from a stall in the Harrow Road. On reaching home she fried a portion of the bacon, and found it so bad that she could not eat it. She at once went back to the Harrow Road, and found the defendants and their stall gone. Afterwards she took the bacon to Mr. Potter, sanitary inspector, who showed it to Dr. Dudfield, the medical officer of health, who condemned it as bad and unfit for human food.—The defence was an alibi. Sharp, the master, did sell goods in the street, but not from a stall in the Harrow Road on the day stated by the witness. He had sold bacon only once, and that was a week later.—Mr. Curtis Bennett convicted Sharp and fined him £5, with three guineas costs, or in default of distress one month. Butterworth was discharged.

In the Aberdeen Police Court, on January 6th, before Baillie Brown, William Grant, butcher, Alford, and William Farquharson, crofter, Schoolhill, Leochel-Cushnie, were charged with having, on December 26th, had in their possession in the Caledonian Railway premises in Guild Street a carcase of beef, intended for human food, which was diseased, and quite unfit for human food. Both the accused pleaded not guilty, and Mr. G. M. Aitken, solicitor, appeared on their behalf.

Mr. Kenneth Cameron, sanitary inspector, stated that the meat was exceedingly soft and watery, and had an offensive odour. Cross-examined, witness said the meat was diseased to the extent of being unfit for human food, but could not say what the disease was. It was not possible that the cow could have been killed because it was choked. The meat was discoloured. Witness could not say whether if the animal had overeaten itself on turnips that would have made the flesh unfit for human food, but any person could have seen that the meat was unfit for human food, whatever the cause was.—Dr. Matthew Hay said the meat was

somewhat emaciated, and that it was soft, watery, and dropsical, had a pale, palm-oil appearance, and a bad odour. A certain portion of the membrane had been stripped off, very likely to hide inflammation. The flesh was quite unfit for human food, and there was no doubt that the animal was suffering from disease. It was somewhat difficult to say what the disease was, but it was very like abdominal. If the animal had overeaten itself on turnips that would have brought about inflammation. Some people might have eaten the flesh without any harm to themselves, and in others it might have given rise to sickness or diarrhoea.—Alexander Low, assistant sanitary inspector, spoke as to the condition in which he found the meat.

William Pyper, farmer, Leochel-Cushnie, examined by the Fiscal, stated that on Sunday, the 25th, he went across to see a cow belonging to accused. The animal was distended, caused by the nature of the weather. This often spoiled the beef, making it soft, but not discoloured. The beast was killed at Farquharson's request, and Grant was sent for to dress it. Grant sent away the meat to be sold, but he did not say to whom it was sent. Grant did not buy the beast. In answer to Mr. Aitken, witness said the cow was perfectly healthy.

William Farquharson then went into the witness-box, and gave evidence on his own behalf. He deposed that he had only one cow. The animal took ill on Sunday morning. It was distended by eating turnips. He had often seen cows in that condition, but never one so bad. He sent for a man, and got the animal's throat cut, which proceeding ended its sufferings. From the time the cow took ill until she was killed would have been about one hour. Witness sent for Grant to dress the cow. He did not see any signs of disease about it, and Grant said that the flesh was perfectly good. Witness did not sell the animal to Grant, but the latter sent it away to be disposed of to the best advantage.

By the Fiscal: Witness did not remember when the animal took ill. The cow was dead before her throat was cut. She just died a natural death.

William Grant was next examined. He could not see, he said, any signs of disease about the animal; in fact, he considered the flesh to be perfectly wholesome. He admitted that the flesh was a little soft. He cut away the lining membrane, but that was only in case the dirt from the probing might act on the flesh. He did not consider the distending a disease. By the time the carcase arrived in Aberdeen it might have been soft enough.

Alexander Copland, farmer, Leochel-Cushnie, examined by Mr. Aitken, said he cut the cow's throat on Sunday, December 25th, after it fell down, in order to let the blood away.

The Fiscal said he would desert the diet against Grant, as the latter was simply acting as Farquharson's servant.

Mr. Aitken argued that the flesh of the beast had not time to be affected by the distending, as the animal, according to accused's statement, was ill for only an hour. He thought accused had done all that could reasonably be expected of him at the time the meat was sent away to Aberdeen.

The Baillie said he sympathised very much with Farquharson, in view of what had been stated in Court that day. Accused, however, had made a grievous mistake in allowing the beast to die. He ought to have killed it. Seeing that the beast died, the flesh was discoloured, and was found to be affected. Under the circumstances, he had to find the accused guilty. If he had taken reasonable care, he would not have been in Court that day. Accused was only a small crofter, and £1 of a fine to him was equal to £50 of a fine to a large farmer. He did not think the case was a serious one, but they could not allow that sort of thing to continue. Accused would be fined £1, with £1 of expenses, the option being ten days' imprisonment.

MILK.

At Kensington Petty Sessions, on January 3rd, Thomas Cook, dairyman, of 42, Shawfield Street, Chelsea, was sum-

moned by the Kensington Vestry for selling on December 6th milk from which 34 per cent. of the original fat had been abstracted.

Mrs. Williams stated that she was in Redcliffe Road, when she saw a man standing by a milk-barrow; on seeing her he crossed over the road, said something to another milkman, crossed over the road again, and asked her if she wanted to buy any milk. Witness bought a pint, for which she paid twopence. She gave the milk which she had purchased to the inspector, who came up at the time.

Mr. Bird: What became of the other milk-barrow?—It went on, sir, and I did not see any more of it.

Arthur Ellender, inspector, stated that he employed the last witness to make a purchase of the milk. After dividing it into three portions, he told the milkman he would leave one portion with him. Witness then asked him his master's name, which he said was Mr. Cook, and he also told him that he was not employed permanently, and that he only took charge of the barrow while Mr. Cook was away. He told witness that he was living at Shepherd's Bush. The inspector then stated that soon after this incident he was travelling on a bus from South Kensington, when he saw the defendant and the man whom he had seen with the milk barrow walking along the Fulham Road together, and engaged in conversation.

Defendant then deposed that he did not know the man referred to; he left the barrow in Redcliffe Road while he went for his breakfast.

Mr. Bird: How long did that take you?

Defendant: I went to breakfast at twenty minutes to ten, and came back at twenty minutes past eleven.

Mr. Bird: You were gone a long time.

Defendant: Yes; I had to fetch some cream. Continuing, he said when he came back he found the small sample bottle in his barrow.

Mr. Leete: But what were you talking with the man for when the inspector saw you in the Fulham Road?

Defendant: I was telling him about the affair.

Mr. Bird: What is your connection with the man?

Defendant: I don't know him, sir.

Mr. Bird: Have you seen him before?

Defendant: I might have done so.

Mr. Bird: You told him about the bottle you found in your barrow; what did he say?

Defendant: He said the best thing to do would be to take it to the Vestry and inquire about it.

Mr. Hill: Anyone could do just as they liked with the barrow while you were away?

Defendant: Yes.

Mr. Bird: You are your own master?

Defendant: Yes, sir.

Mr. Bird said he thought the case had better be adjourned for a week for the appearance of the man who had sold the milk.

MR. JENKIN JONES, carrying on his business at 15, Langton Street, Chelsea, was summoned under the Food and Drugs Act for selling milk containing 12 per cent. of added water.—Mrs. Williams stated that on December 5th she saw the defendant's milk barrow in Ifield Road. She asked for a pint of milk, which was given to her, and for which she paid twopence. She then gave the milk to the inspector.—Arthur Ellender, inspector for the Food and Drugs Act, stated that he instructed the last witness to buy the milk, which he divided into three portions—one he gave to defendant, one he sent to the analyst, and the other portion he kept for himself. Defendant then said, "It is all right; I never do anything to my milk." On the milk being analysed it was found to contain 12 per cent. of extraneous water.—Defendant said the milk was just as he had received it.—Mr. Bird said that he had been too lenient with these sort of cases of late; it was a very serious case, and he should fine the defendant 40s., with costs.

At Thames, on Jan. 7th, James Davies, of Oxford Street, Stepney, was summoned for selling milk adulterated with 17 per cent. of water.—Defendant pleaded guilty.—The prosecution was instituted by James Twaites, one of

the inspectors under the Food and Drugs Act for Mile End Old Town. He said the defendant kept a provision shop, and had also a milk round. Some eighteen months ago Davies was fined 40s. for a similar offence.—Mr. Dickinson fined defendant £6 and 2s. costs.

At Wolverhampton, on Jan. 7th, William Horton, of the Walsall Street Coffee House, Willenhall, appeared to a summons charging him with selling milk from which nineteen per cent. of the cream had been abstracted. Mr. H. Van Tromp, the inspector, prosecuted. Defendant said he had not interfered with the milk from the time he purchased it. A fine of £3 and the costs was imposed.—Noah Barker, of Stafford Street, Willenhall, was fined 10s. and the costs for selling milk from which ten per cent. of the cream had been extracted; and Isaiah Barker, the son of the last-named defendant, was ordered to pay £3 and costs for a like offence.

At Tewkesbury, on January 6th, the adjourned case in which Mr. J. G. Roberts, dairyman, was summoned for selling diluted milk was again heard. It had been adjourned for the defendant to prove that the milk sold was the same as drawn from the cow. The County Analyst, Mr. Embry, attended on December 20th, and watched the cow milked from which the milk purchased had been taken. He afterwards analysed it and found it to be an exceedingly rich milk. He had also analysed a sample furnished to him by P. C. Bunker, and this also he found genuine; whereas that previously purchased from defendant, and which was stated to have been taken from the same cow, contained 30 per cent. of water. Mr. E. W. Moore, for defendant, stated that Mr. and Mrs. Roberts were both unaware how the water became mixed with the milk that was sold. A fine of £1 with £4 3s. 4d. costs was inflicted.

On January 7th, George Chandler, of the Devon and Dorset Dairy Company, Fulham Road, London, and his saleswoman, Clara Marsh, were summoned in respect of selling a pint of milk to Inspector Manning found to contain 15 per cent. of added water. The inspector said that this was a first-class shop. Mr. Guy Stephenson, who defended, said the facts were not disputed, but no one seemed to know how the adulteration occurred. It was the first case of the kind which had happened during the time the business had been in the possession of Mr. Chandler. He had no warranty with the milk supplied to him. Mr. Rose observed that it was a most important Act of Parliament, as in many cases with children cows took the place of mothers. He fined Mr. Chandler £5, with two guineas costs. The summons against Clara Marsh was withdrawn.

At Portsmouth, William Harnes, milk-dealer, 32, St. Mary's Road, Kingston, summoned under the Food and Drugs Act for selling milk from which 18 per cent. of cream had been abstracted, was fined £1 17s. 6d. in all.—Mr. G. Hall King prosecuted.—Mr. E. J. T. Webb, who defended, stated that the defendant had been in business for eleven years past in a small way, and there had only been one case against him before.—Walter Lee, of 54, Charlotte Street, Landport, for selling milk to which 4.5 per cent. of water had been added, was fined 15s., including costs. Defendant stated that he had sold the milk just as he had received it, but he had no guarantee.—Alfred Baxter, milk vendor, of 195, Fratton Road, Fratton, who did not appear, but sent in a medical certificate to the effect that he was suffering from chronic bronchitis, was fined £1 18s. 6d. in all, for selling milk from which 10.9 per cent. of cream had been abstracted. One previous conviction was on record.—Mr. William Gray, Inspector under the Act, proved the cases.

MARGARINE.

At Wigan, on Jan. 6th, William Morton, grocer, of Ince, was summoned for two offences under the margarine act, viz., for selling 1 lb. of margarine and not wrapping it in paper properly marked, and also for exposing for sale

margarine not labelled according to the act. On the 8th ult. Police-sergeant Harrison visited defendant's shop and purchased 1 lb. of margarine at 4d. There was no regulated label on the margarine, and the quantity supplied was not wrapped in a marked paper. Mr. Rees, for the defence, contended that, inasmuch as the officer was told it was margarine when he purchased it, only a technical offence had been committed. There was no attempt to defraud. The magistrates said they felt that justice could not be met unless they inflicted a fine of £10 and costs in each case.

COFFEE.

At Howden, John William Walker, shopkeeper, of Howden, was charged with selling, to the prejudice of the purchaser, half a pound of coffee which was not of the quality required. Superintendent Clarke, of Howden, said that on the 5th ult. he visited the defendant's premises and asked for half a pound of coffee, at the same time informing him that he wanted the same for analysis. The sample was divided into three, and one part sent to Mr. Baynes, the Public Analyst of the East Riding, and a certificate forwarded by him showed that the coffee was adulterated to the extent of 88 per cent. with chicory. The defendant, in reply to the charge, had practically nothing to say in defence, being quite sure in his own mind that he was selling genuine stuff. The Chairman said the defendant had exposed himself to a very serious fine. The public must be protected in regard to adulteration, and as the portion of adulteration in the case was very great, as a warning to others they imposed a fine of £1 and costs.

At Lambeth, on January 5th, Alfred Lewis, of Milkwood Road, Brixton, was summoned at the instance of the Lambeth Vestry for selling as coffee a mixture containing 50 per cent. of chicory.—Mr. Beck defended.—Acting under the instructions of Mr. W. J. Perrin, an inspector in the service of the vestry, a lady entered the defendant's shop and asked for a quarter of a pound of coffee. She was offered a tin of French coffee at threepence, but said she would rather have it loose, and was then served with a quarter of a pound in plain paper, for which she was charged fourpence. The sample was submitted to the public analyst, who certified it to contain 50 per cent. of chicory.—Mr. Beck elicited in cross-examination that the assistant had instructions not to accept coffee in tins, and Mr. Beck suggested that the reason for that was that the tins usually bore labels to the effect that they were mixtures. He thought it rather unfair for the inspector to lay a trap for tradesmen.—Mr. Hopkins: Unfair that the assistant should refuse an article at threepence to get the same thing or something worse at fourpence?—Mr. Beck: If she had been an ordinary purchaser she would have got this package which is marked "French coffee."—Mr. Hopkins ordered the defendant to pay a fine of 40s. and 12s. 6d. costs.

ADULTERATION PROSECUTIONS AT LIVERPOOL.

On January 4th, Edward Ball, provision dealer, Sutton Street, Tuebrook, was summoned for having sold to Inspector Baker as butter a compound containing 10 per cent. of water, and upwards of 60 per cent. of fats other than butter. Defendant, who said he sold the butter as he purchased it, was fined £5 and costs.—March Cleminson, milk dealer, 89, Walton Lane, was fined 40s. and costs for having sold as new milk a liquid containing 3.02 per cent. of fat and 7.87 per cent. of other solids. Seven parts of water had been added to every hundred parts of the poorest milk. Defendant said that he had not added water to the milk.—Thos. Parrington, milk dealer, 3, Salop Street, was fined 20s. and costs for having sold as new milk a liquid containing 2.39 per cent. of fat and 8.84 per cent. of other solids. The milk had been deprived of part of its cream. Mr. Rudd, who represented the defendant, said that his client was away at a cattle show on the date in question. He had been in business fifteen years, and had never been fined before.

ADULTERATION PROSECUTIONS AT BIRMINGHAM.

At Birmingham, on January 6th, Messrs. Ridgway, 125, Broad Street, pleaded in answer to a charge of selling coffee containing 14 per cent. of chicory that the coffee berries had been ground in a machine which had been previously used for grinding chicory, and the magistrates, believing that there was no intention to defraud, imposed a fine of 20s. and costs.—The Maisonette Dairy Company, King's Norton, charged with selling milk adulterated with 10 per cent. of water, called a servant, who stated on oath that he ran short and adulterated his supply to save himself trouble. It was pointed out by the Bench that the company was responsible for the acts of its servant, and a fine of £5 and costs was imposed.—John Harvey, North Street, Harborne, was fined £3 and costs for selling milk adulterated with water and deficient in fat.—For a similar offence Frederick Hedgecock, North Street, Harborne, was fined £1 and costs.—George Cooke, Longmore Street, was fined £10 and costs for supplying margarine not properly labelled to a customer who asked for butter; and John Thomas Clink, provision dealer, Bloomsbury Street, was fined the same penalty for a like offence. The magistrates gave an intimation that as far as lay in their power they were determined to put a stop to these frauds upon the public.

UN SOUND TINNED SALMON AND LOBSTER.

The Portsmouth magistrates, on January 10th, fined Augustus Hamilton Treloggen, of Southampton, £28 10s. for exposing a quantity of unsound tinned salmon and lobster for sale. This was the second conviction.

EUCALYPTUS OIL.

At Clerkenwell Police Court, on January 4th, Robt. S. Page, of 186, Essex Road, Islington, was summoned before Mr. Horace Smith, by the Islington Vestry, for having sold on December 1st, eucalyptus oil that did not conform to the requirements of the "British Pharmacopœia."

Mr. Bramall prosecuted, and said that it was laid down that eucalyptus oil should not rotate the plane of the ray of polarised light more than ten degrees either way in a tube 100 millimetres long. The specific gravity should be 0.910 to 0.930. It should not show the presence of phillandrene by the prescribed test, but should show the presence of a due proportion of cineol. Two samples were taken at the defendant's shop by Inspector Mernagh—one being taken from bulk, and the other being contained in small bottles labelled "globulous oil."

Dr. Teed proved examining the samples submitted to him. The first sample, labelled "globulous," rotated the plane of the ray of polarised light 29 deg. 6 min. to the left in a tube 100 millimetres long. It had a specific gravity of 0.8092, showed the presence of phillandrene, and did not conform to the test for cineol. The second sample, labelled "true eucalyptus oil," rotated the plane of the ray of polarised light 69 deg. 7 min. to the left. It had a specific gravity of 0.3758, showed the presence of phillandrene, and did not conform to the requirements for cineol.

Replying to the defendant, Dr. Teed said the test was based upon the requirements of the "British Pharmacopœia," published in February last.

The Defendant: Is the oil I sold an adulteration?—Dr. Teed: No.

Is it eucalyptus oil?—Yes.

Mr. Horace Smith: I understand you do not contend that the oil contained any foreign matter, but that it was made from an inferior plant?

Dr. Teed: Yes.

The Defendant: Does the sample comply with the "British Pharmacopœia" of 1885.—Dr. Teed: Yes.

The defendant contended that chemists should have been given a longer time to sell out their stock of oil which complied with the "Pharmacopœia" of 1885, and which was

purchased prior to the issue of the "Pharmacopœia" of 1898.

Mr. Horace Smith ordered the defendant to pay a fine of 5s. and £1 3s. in each case—£2 16s. in all.

Robert Vincent, trading as Bishop's Drug Stores, 460, Holloway Road, was summoned for a similar offence. The defendant sold to Inspector Cowling "genuine eucalyptus oil," which did not conform to the requirements of the "British Pharmacopœia" under the prescribed test.—Replying to questions, Dr. Teed admitted that these were the first tests he had made of eucalyptus oil purchased under the Sale of Food and Drugs Act in Islington.—Mr. Bramall said the oil was a specific for influenza.—Mr. Horace Smith imposed a fine of 5s. and 23s. costs.

IS BUTTER "PERISHABLE" ?

SUMMONSES against persons for selling adulterated butter in Battersea were dismissed by the magistrate on January 9th, on the ground that butter is a perishable article, and that proceedings should have been taken within twenty-eight days. The local Vestry points out that this is the first time they have heard butter described as "perishable," and have therefore applied for a mandamus compelling the magistrate to re-hear the cases.

THE ADULTERATION OF OATMEAL.

A MEETING of directors of the Scottish Chamber of Agriculture was held in Edinburgh on January 5th, Mr. David Cunningham, vice-president, in the chair.

On the invitation of the secretary, a representative of one of the largest firms of oatmeal manufacturers was heard on the question of the adulteration of oatmeal. It was no doubt a fact, he said, that a considerable quantity of imported meal from America and Canada was finding its way into the Scottish markets for the purpose of being mixed with what was sold as Scottish oatmeal. This was a very serious matter, as it was damaging the reputation of Scottish oatmeal all over the country, besides making it impossible to sell at a profit. All over England they had the same thing to contend with, and the secretary had letters from Aberdeenshire and Ayrshire to the same effect. The difficulty was in finding a remedy. But the subject was worthy of their consideration as agriculturists. The position taken up by the Board of Agriculture was that they must be furnished with information direct from the complainant before taking action. It was really a difficult matter for a miller to make a complaint against his neighbour, and perhaps the best plan would be for the Board to appoint inspectors to ferret out the evil.

The Chairman thought it was a matter which the Chamber ought to take up.

Mr. Connell explained that while the Board of Agriculture had power to prosecute, they had no machinery for making investigation, and would not prosecute unless a clear case were submitted to them. He would suggest that as Mr. Long was to have charge of the new Adulteration Bill, the Chamber should see that wide powers were given in that Bill to deal with such questions as these.

After some further conversation, it was agreed to ask Mr. Long to send one of his staff to confer with the Chamber on this matter.

LONDON BUTCHERS IN CONFERENCE ON THE PROPOSED ABATTOIRS.

A MEETING of the London Butchers' Trade Society was held in the Farringdon Street Memorial Hall on Jan. 4th. The meeting was called for the purpose of carrying on the agitation against the scheme of the London County Council to abolish private slaughterhouses, and there was a large and representative attendance of the "trade," over which Mr. William Haydon, L.C.C. for Brixton, presided. Mr. J. A. Lindsey, the hon. secretary, was called upon to give a *resumé* of the operations of the society during the past month. He stated that the society's deputations had waited upon about twenty vestries regarding the matter, with the result that the following vestries had passed resolutions in favour

of the retention of private slaughterhouses: St Pancras, Marylebone, Camberwell, Wandsworth, Paddington, St. Mary Abbot's, Kensington, Holborn, St. George-the-Martyr, Southwark, Lee Board of Works, Stoke Newington, St. Giles, Whitechapel, Lambeth, St. Olave's Board of Works, St. Luke, Middlesex, Lewisham District Board of Works, St. George's-in-the-East. Mr. Lindsey also called attention to the fact that the following agricultural societies had passed similar resolutions: Taunton Farmers' Club, Lincolnshire Chamber of Agriculture, Cleveland Chamber of Agriculture, Leicestershire Agricultural Society, Oxfordshire Agricultural Society, Worcestershire Agricultural Society, Leicestershire Chamber of Agriculture, Smithfield Club, Fareham and Hants Farmers' Club, Gloucestershire Agricultural Society, Warwickshire Agricultural Society, and the Herefordshire Agricultural Society.—Mr. Redmond, vice-chairman of the society, added a few words impressing upon those present the extreme necessity of keeping up the agitation with unabated vigour, and of not getting luke-warm in the matter. He proposed a scheme for canvassing the whole district of London, so as to get the opinions of the people outside the trade, which he was quite sure were overwhelmingly against the scheme. He proposed getting up petitions for signature.—Several gentlemen warmly supported the suggestion, and many volunteered to take the canvass-books and to receive signatures for presentation to the London County Council.—The meeting, which had been a wonderfully unanimous and hearty one, then concluded with a vote of thanks to the chairman for presiding.

CORRESPONDENCE.

To the Editor of FOOD AND SANITATION.
BELLADONNA PLASTERS.

SIR,—In a report in your issue of the 23rd inst. upon certain proceedings at the Lambeth Police Court, you give the result of the proceedings, namely, that the magistrate dismissed the summons on the ground that the firm selling the plasters did so under a guarantee, and you go on, quite accurately, to give the magistrate's observations to the effect that after the evidence which had been given neither the company in question nor any other company would be able to say that these American belladonna plasters were of the strength prescribed by the British Pharmacopœia. These rather sweeping general observations on American plasters, particularly as the names of the actual makers were not given in your report, are likely to be highly injurious to other makers of American belladonna plasters whose goods are within the strength of the British Pharmacopœia. In justice to our clients, Messrs. Seabury and Johnson, of New York, who are, we believe, the largest manufacturers of belladonna plasters in the world, and whose plasters have a very large sale in England, we desire to point out that the plasters which were the subject of the before-mentioned prosecution, although American plasters, were not the plasters of our clients, who claim that their plasters are of the highest standard of belladonna plasters manufactured either in America or England, and that they conform to the requirements of the British Pharmacopœia. For your information we inclose published official analysis and a copy of *The Lancet* report, which justify our statement. We should be obliged by your giving publicity in your paper to this letter.—We are, yours, etc.,

M'KENNA and Co.,

Solicitors for Messrs. Seabury and Johnson.

Basing House, 17 and 18, Basinghall Street, E.C.

24th December, 1898.

[We regret that the abridged report, by the omission of the name of the makers of the plasters prosecuted, might possibly lead to suspicion being cast upon all American plasters. The belladonna plasters which formed the subject of the prosecution were those of Johnson and Johnson, who are in no way connected with Seabury and Johnson. The plasters of the latter firm we know by various analyses are genuine.]

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Food and Sanitation.

SATURDAY, JANUARY 21ST, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

All communications for the Editor of "Food and Sanitation" must be addressed to

4, AVE MARIA LANE,
LONDON, E.C.

THE ADULTERATION QUESTION IN 1872.

In a very able address on "Public Health Work," Dr. Malet, M.O.H., Wolverhampton, contrasts the state of public opinion in 1872 with that of to-day.

It is certain (says Dr. Malet) that even advanced Liberals, influenced no doubt by the illusory charms of "liberty," could not tolerate interference with the existing state of things. It is hardly credible that John Bright, in

speaking on the subject of adulteration of food in 1872, could have used these words:

"My own impression with regard to this adulteration is that it arises from the very great, and perhaps inevitable, competition in business; and that to a great extent it is promoted by the ignorance of customers. As the ignorance of customers generally is diminishing, we may hope that before long the adulteration of food may also diminish. The noble lord appears to ask that something more extensive and stringent should be done by Parliament. The fact is, it is vain to attempt by the power of Parliament to penetrate into and to track out evils such as those on which the noble lord has dwelt at such length. It is quite impossible that you should have the oversight of the shops of the country by inspectors, and that you should have persons going into shops to buy sugar, pickles, and Cayenne pepper, to get them analysed, and then raise complaints against shopkeepers and bring them before the magistrates. If men in their private businesses were to be tracked by Government officers and inspectors every hour of the day, life would not be worth having; and I recommend them to move to another country, where they would not be subject to such annoyance."

In spite of Mr. Bright's objection to protecting the poor ignorant customer from dishonest shopkeepers, the Adulteration of Foods Act of 1872, and subsequently the Sale of Food and Drugs Act of 1875, were passed, and have to a large extent accomplished their purpose, without, I believe, banishing any honest shopkeepers from this so oppressed country.

I have quoted Mr. Bright's remarks to emphasise the state of things then. It is so different now, that many of you may fail to see the magnitude of the change by failing to realise the past. Conditions of trade and work, the relations of employer and employed, of buyer and seller, and of landlord and tenant, were regulated almost solely by the then accepted laws of political economy, such as the law of supply and demand. It was generally felt that for legislation to interfere with these would be as useless, and as absurd, as for it to interfere with the laws of Nature. And yet these laws of political economy were founded on pure self-interest, regarded as the basis of all human action, and were therefore the direct opposite of the laws of Christianity which are based on goodwill, and are indeed the natural laws of true humanity.

MAIZE IN SELF-RAISING FLOUR.

A DEPUTATION from the Birmingham and Midland Counties Grocers' Protection and Benevolent Association, consisting of Mr. Jarvis, Mr. J. Instone (President), and Mr. G. Bolton, waited upon the Health Committee of the Council with reference to the sale of self-raising flour. Mr. Jarvis said that for some years self-raising flour had been sold in large quantities by grocers and grain-dealers, and until recently there had been no interference on the part of the municipal authorities. Of late, however, several prosecutions had been instituted in different parts of the country, and fines imposed after evidence had been given that the self-raising flour contained other matter than the ordinary pastry or bread flour, as, for instance, an admixture of maize-flour. What the deputation wanted to know was whether the Committee would fix a standard of the quantity of maize-flour that might be used. Mr. Instone said the question affected a very large number of tradesmen in the city. Self-raising flour was much appreciated by ladies as a great convenience. It was used not so much for bread as cakes, puddings, and fancy articles, and the grocers were anxious that the Health Committee should not prosecute in cases where there was less than five per cent. of farinaceous substance other than the pure wheaten flour. Mr. Bolton said the Association desired that the matter should be placed on a fair basis, so that there might not be any friction between the grocers and the Committee. The Association deemed it advisable upon hearing that cases had been brought before the Committee to approach the Committee on the subject for the purpose

of ascertaining what objections there could be against the use of maize flour, which was known to the public as corn flour, and was used in making cakes, blanc manges, etc. No one could object to maize flour on the ground that it was not nutritious. It might not be so nutritious as ordinary wheaten flour, but there was an excuse for using it in small proportions for self-raising flour. The fact that it was a self-raising flour implied that there must be an admixture to bring about that effect, and the question was who was to decide the technical point of the trade secret. For 30 years the self-raising flour had been before the public, and this was the first time any attempt had been made to thwart the sale of the article. Of course, the Association would do their best to put a stop to the use of alum or any foreign substance; but they thought that maize flour was not only necessary, but almost obligatory, and five per cent., he considered, was really necessary. So far as the cost was concerned, it would make very little difference, because the value of maize flour was about 3s. 7d. per bushel, ordinary wheaten flour costs 4s. 9d. per bushel, and the price of rice flour, which would be the only substitute for maize, was 5s. per bushel. There was more nutrition in maize than in rice flour, and the difference in the value, therefore, by the use of five per cent. of maize flour to a flour which costs 4s. 9d. per bushel was really immaterial. The Association claimed that such a small proportion ought not to be objected to, and if the Committee thought the public ought to be made aware that maize flour was used the Association were prepared to submit a label for use so as to avoid any friction with the Committee. Alderman Cook (the Chairman of the Committee) said the Committee would consider the points laid before them, but the deputation had clearly admitted that more than five per cent. of maize flour ought not to be used. The Committee could not give any undertaking as to what they would do. They did not wish to do anything unnecessarily to limit in any way the sale of the article, but they must carry out the intention of the Food and Drugs Act. The grocers evidently desired to do that which was right, and he was convinced that they would work loyally with the Committee in carrying out a necessary duty in the interests of the people. Dr. Alfred Hill had presented the result of various analyses, and the Committee must be at liberty to decide what they would do when cases came before them. They could not give any undertaking not to take action if not more than five per cent. of maize flour was used, but the views of the deputation would receive the greatest consideration. In the course of a short discussion Alderman Dr. Barratt said there must be an alkali and acid with the flour to form self-raising flour. Why did not the trade buy the self-raising flour consisting of wheaten flour, acid, and alkali? Mr. Bolton said the reason maize flour was used was to assist the flour in its keeping properties. He should not know where to buy the flour as suggested by Dr. Barratt. The Lord Mayor said that if the grocers adopted a label stating what the mixture really was the difficulty might be overcome. The Committee did not want to stop the sale of maize flour or wheaten flour. All they desired was that the public should have what they asked for. Mr. Jarvis said that if the Committee expressed an opinion with reference to the mixture the grocers would be able to adopt a standard. Alderman Cook said they could not do that. They must consider every case brought before them on its merits. The deputation thanked the Committee, and then withdrew.

WATER AT SPIRIT PRICE.

ALBERT E. PILGRIM, of the Montpelier Music Hall, Walworth, was summoned, at Lambeth Police Court on January 12th, at the instance of the Newington Vestry, for selling whisky not of the nature, substance, and quality of the article demanded by the purchaser.—Mr. E. Maitland appeared for the defence.

On December 13th a man named Stout, who on that occasion was acting as assistant to Mr. Selby, one of the inspectors in the service of the vestry, entered defendant's premises and made a purchase of whisky for the purpose of analysis. In his evidence Stout stated that he asked for

half-a-pint of special Scotch whisky. He was supplied in a bottle which he provided for the purpose, and was charged 1s. 6d. He handed the whisky to Inspector Selby in the same state as he received it.

Mr. Maitland put in a notice, printed in red ink, in the following terms: "All spirits sold here are reduced below legal standard of twenty-five per cent. under proof strength."

In cross-examination by Mr. Maitland, the witness Stout said he did not see such a notice hanging up in the bar.

Inspector Selby said he received the sample from the last witness. The Public Analyst certified it to be 47·7 degrees under proof, or 22·7 degrees below the legal limit of 25 degrees under proof.

Cross-examined: He had been at the house since the sample was taken, but that was at the defendant's request. The summons was not issued until January 3rd.

Mr. Maitland: I put it to you that three days after you took the sample, you told him (defendant) that a summons would be taken forthwith.

Inspector Selby: No, sir. Nothing of the sort.

On December 21st, which was a Wednesday, did you go again and say the sample had been analysed, and in all probability he would have the summons on the following Thursday or Friday?—No, sir. Nothing of the sort.

Were you not frequently in the public-house and the music-hall which belongs to the house between December 13th and the present time?—No, sir. I have been in there twice since Mr. Pilgrim has had it.

Last Saturday, about eleven o'clock in the evening, did you call upon the defendant and say you wished to speak to him?—No, I did not.

Did you go with him into the bar parlour?—I did go into the bar parlour.

Did you ask him what course he was going to take upon the hearing of this summons?—No. He asked me if I could give him a tip as to how to get out of it.

Then it was a case of "Walk into my parlour, said the spider to the fly"? (Laughter.) How do you justify going into the bar parlour at all?—I did not see why I should not. My action has been straightforward throughout the whole piece.

Did you say that, if he would not make it too warm for you, you would not bring forward some facts which you otherwise would?—Absolutely no.

Did you say, "I only want a conviction. I don't want a heavy fine"?—I said nothing of the kind. The whole thing is a concoction on the part of Mr. Pilgrim. It was the fact that Mr. Pilgrim attended the meeting of the Food and Drugs Committee of the vestry. He (Mr. Selby) also went before the committee, and satisfied them as to his conduct in the matter.

Mr. Maitland said the defence in this case rested upon the notice. After commenting in severe terms upon the evidence of the witnesses who had been examined, the learned gentleman proceeded to explain that the defendant sold his ordinary draught whisky at a low price—6d. per quartern. That whisky was good in quality, but low in alcoholic strength. He also sold a special whisky, which was kept in bottles, and which was sold at 9d. per quartern. The witness Stout was served by a barman, who left the defendant's service on the following morning, and who must have served him with the sixpenny whisky.

Defendant was fined £10, and 17s. 6d. costs.

At Sutton Coldfield, Maria Glew, landlady of the "Barley Mow," Hill, was fined £2, and 10s. 6d. costs, for selling whisky adulterated with 7 per cent. of water over the 25 degrees under proof allowed by Act of Parliament.—The case was proved by Mr. F. Merrifield, the local inspector under the Food and Drugs Act.

MEAT.

At Belper, on January 12th, Edward Adams, a butcher, residing at Minster, was charged with exposing unwholesome meat for sale for human consumption, at Belper, on

December 17th.—Dr. Allen, the Belper Medical Officer, said the meat was flabby, and gave off a nasty, unwholesome smell. It was totally unfit for human consumption.—A total penalty of £22 9s. 6d. was imposed. Defendant did not appear. The alternative was two months in gaol.

At Grimsby, on January 12th, John Swift Ward, butcher, of the Bull Ring, was fined £2 10s. for exposing diseased meat for sale. It is stated that the animal had suffered from general tuberculosis, but was not in a very emaciated condition, while a good average price was given for the beast.

At the Guildhall, London, on January 12th, Richard Goddard, farmer, of Lower Place Farm, Acton, was summoned, before Sir Joseph Dimsdale, for sending two sides of diseased pork to the Central Meat Market, intending it for sale as human food.—Mr. Vickery prosecuted on behalf of the Corporation, and Mr. Ricketts defended, and pleaded Not Guilty.—The medical officer of health, to whom the meat was submitted on seizure, said the animal had suffered from lung disease, as was shown by the lungs adhering to the ribs. There were also tubercular deposits, and the general appearance would make it apparent to any one that it was unfit for food. Had it been eaten it would have had a very highly dangerous and immediate effect.—Mr. Ricketts, for the defence, pointed out that the medical officer had said there was nothing from the external part of the pig to show that it was bad. The pig—a boar—had met with an accident, it was then killed and sent to market, but the defendant had no idea that anything was the matter with it.—Sir Joseph Dimsdale said he was of opinion that the defendant was unacquainted with the fact that the meat was bad, but suggested that there was carelessness for which he was liable. He did not think the defendant was cognisant of the bad state of the meat, but still he had not exercised sufficient care. He would be fined £10, and £1 10s. costs.

JAMES SAINTHEY, an old man, living at Rook Lane, Cottenham, Cambs, appeared at the Guildhall, London, on January 11th, on the charge of supplying the Meat Market with pork described as being "unsound, unwholesome, and totally unfit for the food of man."

Mr. Vickery, who represented the Corporation, placed the facts before Sir J. C. Dimsdale. He stated that Saintey was a noted character in dealing with such bad meat. When the pork was sent to London it created a sensation in the Meat Market.

Dr. W. Sedgwick Saunders, Medical Officer of Health for the City, said he saw this pork after it was seized. It was in a filthy condition, and, needless to say, quite unfit for human food. Recent scientific research had shown beyond a doubt that pork when bad was worse than any other bad meat.

Superintendent Burrow, of the Cambs Constabulary, said on December 19th he called on Mr. Saintey concerning the pig. He declared that he had partaken of portions of it himself.

Mr. Vickery: Perhaps he is not very particular as to what he eats.

Witness: From my own knowledge of the man, I should say he would eat anything. He lives in a wretched shed, the stench from which is simply abominable.

Defendant went into the witness-box, and said he had been a butcher all his life. He believed this meat was "all right."

It was shown that Saintey had previously suffered imprisonment for dealing in bad meat, and the Alderman now sent accused to prison for six months with hard labour.

UN SOUND FOOD APPEAL.

At the County of London Sessions, on January 14th, before Mr. M'Connell, Q.C., and other Justices, Charles Watling Baxter appealed against two convictions by Mr. Kennedy, at Greenwich Police-court on December 21st, when he was fined £50 on each of two summonses in respect of alleged unsound food. Mr. Elliott was for the appellant, and Mr. Dalby for the respondent.—Mr. Dalby

said that about ten months ago the appellant opened a general shop in Paradise Street, Rotherhithe, and stocked it with, among other things, a large quantity of tinned food. On November 23rd he sold the business to a Mrs. Grant, together with part of the stock. About a week later, Mr. Davies, chief sanitary inspector to Rotherhithe, called at the premises and seized a large number of tins in the shop and at the rear, and the contents, which were in a disgusting condition, were ordered to be destroyed by the magistrate.—The sanitary inspector said he seized tins of soup of various kinds, rabbit, fruit, condensed milk, tomato pulp, lobsters, oysters, etc. Some of the tins were "blown"—they had become bulged in consequence of the gas generated, and then a hole had been made to allow the gas to escape, and the hole was then soldered over.—Mr. Cox, the agent who disposed of the business for the appellant, was questioned as to the stock, and said he did not think there were any special brands of tinned food at the shop.—Mr. M'Connell: The condensed milk is the Robert Burns brand, and the tins are adorned with his portrait.—Mr. Elliott: And underneath is this quotation from Burns:

"I'll be mair thoct of, Jean,
A hunner years after I'm deid."

Mr. Dalby: It is only a fancy having that on the tins.—Mr. Elliott: A peculiar quotation of this milk.—(Laughter.)—Mr. Dalby: My friend understands the poetry of condensed milk better than I do.—(Renewed laughter.)—The appellant said he knew the tins at the rear were bad, and he arranged with Mrs. Grant to have them removed by the vestry. As a matter of fact, the dustman carted some away. The others which were in the shop, apart from those he had sold to Mrs. Grant, he had given instructions to be returned to the wholesale dealers in exchange for others.—Cross-examined: Some of the tins he bought unlabelled from a man named Palmer as salvage from a fire.—Mr. Dalby: Where did you get the labels from?—The Appellant: There were some labels at the shop when I took the business over.—Mr. M'Connell: What do you say blown tins are?—The Appellant: I have only known about a month. Holes get into the tins, and the bad air gets in and bulges the tins out.—Mr. M'Connell: Oh, come, come! Bad air gets in! How do the holes get in?—The Appellant: I cannot say. I have had no experience of that.—Mr. Elliott: Would it pay you to sell bad food in the district?—The Appellant: It is absurd. If I did so it would be thrown at me.—(Laughter.)—Mr. M'Connell pointed out that the appellant had been convicted of selling unsound food to Mrs. Grant, and of having other unsound food exposed for sale on the premises belonging to himself. These summonses would have to be kept distinct.—Sanitary-Inspector Davies, in reply to the Bench, said that he had seized 239 tins, which the appellant had sold to Mrs. Grant, and they were all found to be bad.—Mr. Elliott submitted that Baxter was ignorant that the contents of these tins were unsound.—Mr. M'Connell said the Bench had decided to affirm the conviction and penalty of £50 with regard to the goods sold to Mrs. Grant. With regard to the case relating to the other tinned goods on the premises, the Bench thought that sufficient doubt had been raised by the evidence as to whether they were deposited for sale to justify them in quashing the conviction and penalty.

MILK.

At CORK, on January 13th, Michael M'Carthy, farmer, Caherlag, and part proprietor of the Middleton Dairy, King Street, was prosecuted by Sergeant Kirby for having sold milk deficient in fat to the extent of 12 per cent. The sergeant said the analyst's certificate showed that the milk was 12 per cent. below the standard of poor quality milk.

Cornelius Donoghue, the boy from whom the milk was taken, stated that he got the milk at the Middleton Dairy in King Street. He took about 9 gallons that morning, 2½ of which had been distributed to customers when the sample was taken by the sergeant.

A fine of £2 and 10s. costs was imposed.

At Halifax, on January 10th, John Edward Mackrell, milk-dealer, of Savile Parade, was summoned under the Food and Drugs Act for selling milk which was not of the substance and quality of the article demanded by the purchaser. Mr. Tordoff (from the Town Clerk's office) prosecuted, and Mr. Mackrell represented the defendant, who pleaded not guilty.—Mr. Tordoff, in opening the case, said on December 7th Inspector Archbell saw defendant's boy, Tom Lyons, selling milk in and about Woolshops. He noticed him in the Lower George Yard, and obtained a sample from him. The Inspector noticed that Lyons put the can out of which he had been delivering milk back into the cart, and take another can out of the cart, and with that can went into Mr. Bennett's shop, near the top of Woolshops. The Inspector followed him, and asked him for a pint of new milk out of the can from which he had supplied Mr. Bennett. Lyons told the Inspector it was not the same kind of milk that he had supplied him with from the other can. The Inspector asked whether it was new milk, and was told that it was not so good as the other he had a sample of. The Inspector got a pint of new milk from that particular can. It was divided into three parts, and one part was forwarded to the Borough Analyst, who certified that it contained 11 per cent. of added water.—Inspector James Archbell gave evidence bearing out this statement. Cross-examined by Mr. Mackrell, he admitted that the first sample he had came up to the Somerset House standard. Lyons did not say to him that Mr. Bennett had not paid the full price for the milk he had purchased. Milk was generally a little weaker in summer than in winter.—One of the Sanitary Inspectors also gave evidence.—Mr. Mackrell said his client might be described as one of the leading tradesmen in the town, and not only ran the risk of losing his milk trade, but also of losing his reputation as a leading tradesman. The milk in question was purchased for bakehouse purposes. It was a portion of the milk that had come from the farm on the previous afternoon, and most of the milk was delivered the same night, but this remained in the shop until that morning. The quantity delivered to Mr. Bennett was a quart, for which he paid 2d. or 2½d.—Defendant then went into the box and bore out Mr. Mackrell's remarks. He said he had been a milk dealer for seventeen years.—The Bench remarked that the chief witness in the case, unfortunately, had crossed the border. The Bench were disposed to give the defendant the benefit of the doubt, and therefore they would dismiss the case.

At Chichester, on January 14th, William Collins, of Bognor, was summoned for selling milk without giving notice that a portion of the fat had been abstracted, at Bognor, on December 5th. Mr. W. P. Cogan supported the summons, Mr. F. B. Tompkins appearing on behalf of the defendant.—The case against the defendant, who is a farmer at Eastergate, and carries on the Decoy Dairy Farm, Bognor, was that on the date mentioned P.C. Wilkins purchased at his shop a pint of new milk for 1½d., which, on being subsequently analysed, was found to be minus 12 per cent. of its fat, the opinion of the analyst being that the sample was either skim milk or fresh milk mixed with skim.—For the defence it was admitted that there was a technical offence, but the defendant's son (Reginald Collins) explained that there had been no intentional skimming of the milk, the reduction of the fat having occurred in the following way: on the morning in question four gallons of fresh milk were placed in a pan at the shop, and customers were served from it at 2d. per pint up to one o'clock. The constant dipping into the pan caused the cream to disappear, and the bottom part of the milk was consequently deficient in fat. In consideration of that fact the price of the milk, after one o'clock, was reduced to 1½d. per pint, and there was no intention whatever to impose on the public.—The Bench imposed a fine of 5s. without costs.

At the Sunderland Police Court, on January 10th, James McLaren, of the Offerton Hall Farm, was charged with supplying milk from which fat had been abstracted. The Town Clerk (Mr. F. M. Bowey) prosecuted on behalf of the Health Department of the Corporation, and Mr. Scott-

Fox, Q.C. (instructed by Messrs. Moore, Longden, and Mann), defended. Mr. I. Isaacs watched the case in the interests of the Sunderland Equitable Industrial Society, to whom the milk in question had been supplied.—Mr. Bowey stated the case for the prosecution, and Mr. Scott-Fox, for the defence, submitted that no abstraction of any kind had been made from the milk by his client.—Mr. John Pattinson, analyst, of Newcastle, gave evidence as to the results of analyses that he had made of the milk. He stated that one sample had only 1.72 per cent. of fat, whereas normal milk contained at least 2.75 per cent.—After a long hearing the Bench dismissed the case.

At West Hartlepool, Henry H. Corner was charged with selling milk not up to the required standard of quality. The case was adjourned from a previous court, an application having been made by defendant's solicitor (Mr. Harrison) for an analysis to be obtained from Somerset House. This was now produced, and showed that the milk contained 14 per cent. of added water.—Fined 40s. and costs.

At Clerkenwell, on January 11th, Mr. Bros dealt with a number of summonses for selling adulterated milk, taken out by the Clerkenwell Vestry.

Thomas Burroughs, of 3, Douglas Street, was summoned for selling skimmed milk containing 7 per cent. of added water.

Inspector Green bought a pint of the milk for a penny, in the street, and had it analysed, with the result set forth in the summons.

Defendant said he sold the milk as he received it, and was fined, with costs, 12s. 6d.

Mr. Wright, of Risinghill Street, was summoned by Inspector Bartlett, and was fined, with costs, 12s. 6d., for selling milk adulterated with 12.4 per cent. of water.

Mr. Daley, of 18, Collier Street, was fined the same amount for selling milk adulterated with 14 per cent. of water.

Charles Atkinson, of 78, Collier Street, was also fined 12s. 6d., including costs, for selling milk containing 13.8 per cent. of water.

Messrs. Evans and Sons, of 29, St. Helena Place, were summoned for selling milk that was adulterated with 9.4 per cent. of added water. A fine of 20s., and 12s. 6d. costs was imposed.

At West Ham, on January 11th, Thomas Frost, a cow-keeper and dairyman, of 22, Whitwell Road, Plaistow, was summoned before Mr. Baggallay, under the Food and Drugs Acts, for refusing to sell for analysis certain milk which he had exposed for sale.—The proceedings were taken at the instance of Dr. C. Sanders, medical officer of health for West Ham, one of whose officers, on December 8th, saw the defendant's son in Balaam Street, Plaistow. The lad was carrying a milk can towards a cart in which were other cans bearing the name of the defendant. Mr. Smith, the officer, told the lad he was an inspector under the Food and Drugs Act, and asked for a pint of milk from the can he was carrying. The lad said he would call his father, and when the request was put to the defendant, he said he could not serve from that can as it was bought milk. He was asked if he knew he could be prosecuted for refusing to sell, and he replied, "Yes; but I certainly must refuse, and will take the risk. You know my name and address." He then got up into his cart and drove away.—In reply to the defendant the inspector said Mr. Frost did take the jug and offer to serve the milk out of any of the other cans, but he (Smith) insisted on having it out of the can the lad carried.—In answer to Mr. Baggallay, Inspector Smith said he had not seen the lad serve any customers from the can.—The defendant said that on account of the death of a cow he had run short of milk, and he would not serve Mr. Smith with this particular milk, as it was some that he had just bought, and he was not sure of it. He had been in business in the district for twenty-five years, and had always served any inspector who stopped him.—Mr. Baggallay said the question was whether the defendant had refused to sell milk which was exposed for sale, and it was most important to know if the milk was exposed for sale. Here the evidence

failed to prove the material point, and the summons must be dismissed.

DANIEL JONES, of 8, Prince Regent's Lane, Canning Town, was summoned for selling milk which on analysis proved to be adulterated with 11 per cent. of added water.—The defendant said he sold the milk as he bought it, and always paid the best price for it.—He was fined £3 and 19s. 6d. costs.—George Wilkins, of 82, Church Street, West Ham, was summoned for a similar offence, the adulteration being 14 per cent. of added water.—Mr. B. Storr, for the defence, pleaded guilty, and said the defendant had had many samples taken and never a complaint before. He sold this as it was bought.—A fine of £3 and 17s. 6d. costs was imposed.

At Manchester on January 11th, Elizabeth Mottershead, of Cowbrook Farm, Gawsworth, was fined £3 and costs for consigning to a Manchester milk dealer on the 9th December two samples of milk containing respectively 12 per cent. and 2 per cent. added water. Mr. Brown, solicitor, Stockport, appeared on behalf of the defendant. Edward Robinson, Page Farm, Clitheroe, was fined 40s. and costs for consigning to a Manchester milk dealer on the 13th December milk containing 11 per cent. added water, and Albert Burdett, of Carlisle-street, was fined 20s. and costs for selling to the inspector on the 29th November last milk which had 2 per cent. water added and 20 per cent. fat abstracted. Mr. Superintendent Rook, of the Sanitary Department, prosecuted on behalf of the Corporation.

At Petworth, Andrew Ward, of Guinsteads, Petworth, was charged with selling at Petworth on November 28th, 1898, adulterated milk, and pleaded not guilty.—P.S. G. Carter, stationed at Petworth, purchased one pint of milk from Ward on November 28th last, for which he paid 1½d., and divided the purchase into three parts as usual, one being for the public analyst.—Mr. Supt. Read said he received a report from the public analyst upon the sample sent to him, dated December 11th, 1898, which stated that of milk there were ninety-three parts and water seven parts. Defendant, giving evidence, said that he sold the milk as he had purchased it. It was mixed milk, and he did not receive a written guarantee of its purity.—The bench imposed a small fine of £1, inclusive of costs, or in default fourteen days.—Defendant asked time for payment.

At Cheshunt Petty Sessions, George Dewbury, dairyman, of Mill Lane, Cheshunt, was summoned for selling milk adulterated with water. Mr. Avery, solicitor, defended.

Mr. T. Johnson, inspector under the Food and Drugs Act, prosecuted. He said that on December 19th he saw defendant's son selling milk in Cheshunt Street. Witness purchased a pint and had it analysed. The analysis showed that it was adulterated with water.

Arthur Dewbury, defendant's son, said that at the time in question his father was in hospital, and witness carried on the business. On this particular day witness purchased four quarts of milk from another tradesman, and mixed it with two quarts of his own. It was from the mixture that the Inspector took the sample. Witness's own two quarts had not been adulterated in any way.

P.S. Parsons proved two previous convictions against the defendant for adulterating milk.

The Chairman said this was not the first time, and the Bench felt they must increase the penalty. Defendant would be fined £2, and 10s. 6d. costs, and 10s. 6d. analyst's fee.

At Bristol, on January 13th, Emily Walters, milk dealer, of Marlborough Street, was summoned for selling milk containing not less than 10 per cent. of added water. Mr. Robinson (Messrs. Wansbrough and Co.) prosecuted. It appears that on December 28th Mr. Simpson, the Inspector under the Food and Drugs Act, went to the shop of the defendant and purchased one and a half pints of milk. He then told her who he was, and divided the milk into three parts, as required by the Act. He submitted one part to the public analyst, and it was found to be adulterated with not less than 10 per cent. of added water. The defendant

denied the adulteration, and said she sold the milk as she received it from the wholesale dealer. The Bench inflicted a fine of £2, including costs.

ADULTERATION IN EAST LONDON.

STEPHEN EVANS, of 27A, Dean Street, St. George's, was summoned at Thames Police Court on January 13th, for selling milk adulterated with 10 per cent. of added water.—Defendant said he sold the milk as he received it.—Fined £5 and 23s. costs.

For selling coffee adulterated with 50 per cent. of chicory Jane Ridgewell, of 1, Wapping Wall, Shadwell, was fined 10s. and 23s. costs.

CHARLES TOMS, of 63, Brook Street, Ratcliff, was summoned for selling milk adulterated with thirty-three per cent. of water. Defendant was a cowkeeper, and he told the inspector he was surprised he should come out and take a sample on Sundays. He (defendant) called it "highway robbery towards a poor man." On behalf of defendant Mr. J. E. Waters said his client sold the milk at 2d. a quart, and not as a pure article.—Defendant was called, and said all he did to the milk was to water it, and that did no harm, and was not poison. (Laughter.) His customers were well satisfied with it.—Defendant, who had previously been fined £3 for a like offence, was ordered to pay £10 and 23s. costs.

For infringing the Margarine Act, Elizabeth Jones, of 334, Cable Street, Shadwell, was fined 30s. and 23s. costs; Elizabeth Gidley, 1, Warton Place, Schoolhouse Lane, Ratcliff, £4 and £2 6s. costs, and Jenkin Jones, of 30, Limehouse Causeway, 30s. and 23s. costs.

MARGARINE.

At Birkenhead, on January 4th, John Peter Evans, grocer, and a member of the Birkenhead Town Council, was summoned for selling margarine as butter, and for neglecting to label margarine as such. He was fined £14, and £3 costs.

At Smethwick, Charles Waterson, of Gilbert Road, Smethwick, was summoned for exposing for sale a parcel of margarine which had not a printed label attached to it as required by law. Mr. Van Tromp (Inspector under the Foods and Drugs Act) appeared to prosecute. An assistant called at defendant's shop on November 26th and purchased three half pounds of margarine, but none of the pieces from which they were cut bore a margarine label; and although the purchaser paid different prices for two lots of the butter, defendant said they were exactly the same. There was a further charge of selling margarine for butter on November 29th. Mr. Tromp asked that heavy penalties should be imposed in these cases, as out of 160 samples taken in that district recently no fewer than 40, or 25 per cent., had turned out to be adulterated. Defendant was fined £5 and the costs in the first case, and the costs in the other, making a total of £6 1s.—Jane Allbrighton, of Grove Lane, was summoned for selling margarine for butter, on November 29th. It was contended, in defence, that the label lay by the side of the sample sufficiently near to comply with the provisions of the Act. Mr. Tangye, in dismissing the case, advised defendant to be more careful in future.—Elizabeth Faux, of Grove Lane, was charged with a similar offence.—Defendant pleaded that she did not usually sell butter, but she obliged the Inspector's assistant by selling him part of the butter she had for her own use. Mr. Tangye said the case would be dismissed on payment of 19s. costs; but if the Bench had the company who supplied her before them they would be treated differently. Mr. Tromp said he wished the small shopkeepers would tell his assistant the name of the wholesale dealers who supplied them, as they frequently made game of their customers.—Allan Rimmell, of High Street, was summoned for exposing margarine for sale without a label on November 18th. It was pleaded that the label had fallen off, but a fine of £1 7s. 6d., including costs, was imposed.—William Hewitt, of Grove Lane,

was fined 20s. and costs for selling margarine as butter on November 29th.

At Belfast, on January 9th, Inspector M'Master summoned Alice M'Kay, 19, Chates Street, for selling margarine for butter on November 15th. According to the evidence the inspector bought a pound of what appeared to be butter, but which turned out to be margarine. The sum of 1s. 1d. was paid for the article. When told that the stuff was to be analysed, the shopman said it was bought as butter, and was sold as such. Mr. Harper, for the defence, admitted that the sale took place, and that the article was not butter. But he relied on the fact that Miss M'Kay bought the stuff from James Lewis, 16 and 18, Newtownards Road, Belfast, a recognised dealer in butter. His client gave the highest price for the article, which was invoiced as butter. A sister of Miss M'Kay swore that what Mr. Harper said was true. In answer to Mr. M'Erlean, for Lewis, witness said she ordered butter from Lewis after November 15th, and received a warranty, which Mr. Lewis at once gave. Mr. Hodder thought that the evidence of defendant's sister was true, and the summons was withdrawn.

JAMES LEWIS, 16 and 18, Newtownards Road, Belfast, was summoned for selling the defendant M'Kay 9lb. of margarine which was not labelled, on November 12th. —Defendant swore that the sale he made to Miss M'Kay was butter, and part of a consignment called "Enniskillen First." In answer to Mr. Harper, witness admitted that he was fined twice for selling margarine for butter retail. Mr. Spiller proved a number of convictions against Lewis. Mr. Hodder said their Worships entertained no doubt in the case. Defendant was not entitled to very much consideration from the magistrates, who were of opinion that he had acted very badly. Lewis, when he supplied the order, knew very well what he was doing, and seemed to have little compunction in imposing on the public. A fine of £20 and costs was imposed.

At Thames, on January 12th, for selling a substance as butter, but which on analysis was found to contain 88 parts of margarine, Mrs. Elizabeth Rose Coombs, of 15, Forester Street, Mile End, was fined 20s. and 23s. costs.—Mr. Milner Jutsum prosecuted on behalf of the Vestry of Mile End Old Town; and Mr. C. Cox was the Inspector in the case.

At Lowestoft, on January 12th, the Mayor in the chair, John King, manager for Messrs. Thomas Lipton and Co., was summoned by Philip Kett, sanitary inspector, for selling adulterated butter on the 6th December; and a second summons charged him with selling margarine in an unlabelled packet on the same day. The Town Clerk (Mr. Nicholson) prosecuted, and King was defended by Mr. Fred W. Beck (Messrs. Neve and Beck, Lime Street, London, E.C.). The Town Clerk stated that on the 6th December the Inspector went to Messrs. Lipton's shop in the London Road, and he there purchased 1½ lb. of butter from King. The sample was divided into three equal portions, one of which had been subjected to analysis, and found to contain 80 per cent. of butter and 20 per cent. of other than butter fat. One of the samples was handed to the defendant King, and the third sample was in Court that morning. Inspector Kett substantiated the statement made by the Town Clerk, adding that he paid 1s. 6d. for the goods he purchased. Cross-examined: There were three lots of butter on a stone slab, and he asked to be supplied with butter from the centre piece. The butter was wrapped in plain paper, with no notification as to what it was. He was positive it was not wrapped in the paper produced, and which he left lying on the floor of the shop. The paper produced stated that Messrs. Lipton guaranteed all their butters pure, and he was sure what he purchased was not wrapped in the paper produced. The third sample had been in the possession of witness ever since the date of the purchase, and had not been tampered with. Philip Frederick Kett, jun., said he accompanied his father to Messrs. Lipton's shop. The butter was wrapped in one of the ordinary business papers issued to customers. Cross-examined: He did not think the paper produced was like

the one in which the butter was wrapped, and he did not know what became of the wrapper. It was on a Saturday when he and his father went to Messrs. Lipton's. In defence, Mr. Beck said the duty of the Inspector had been badly carried out, and he regretted the wrapper in which the butter was supplied was not produced, as it should have been. According to his instructions, it was originally wrapped in the paper produced, which Kett left lying on the floor of the shop. The paper in question stated that Messrs. Lipton guaranteed all their butters pure, and it was his duty to substantiate that statement. They had been told by the Inspector that the third sample had not been interfered with since December 6th, and he should ask the Court to order a sample to be sent for analysis to Somerset House, and to adjourn the case until the Government report had been received. Messrs. Lipton had 300 branches all over the country, and had never yet had a conviction recorded against them. The butter complained of was supplied by a well-known Irish firm and was sold to Lipton's with a warranty. According to the practice of the firm, directly Inspector Kett had vacated the shop, the whole of the butter was withdrawn from sale, and a sample sent to the head office in London for analysis. The sample had been pronounced pure, and the manager in consequence replaced the bulk and disposed of the same to the public. Messrs. Lipton had a reputation, and it was important to them that the third sample should be sent to Somerset House. Mr. Beck commented on the length of time that had passed since the date when the samples were taken, and called King, who bore out the statement made in support of the defence.

In answer to the Town Clerk, King said that the sample given him by Kett he placed, according to the instructions given him from the head office, in the safe. He kept it until December 30th, when he destroyed it, thinking that everything was correct, and especially so after the letter from headquarters stating the sample was genuine. Had he thought proceedings would have been taken he should not have destroyed the sample left with him.—Mr. Beck said he was prepared to call evidence to prove the genuineness of the sample sent to London by King, but the Town Clerk objected, on the ground that it was not one of the sealed samples. Mr. Beck said he would not press the point, but would ask that the sealed sample now in Court should be sent to Somerset House. Mr. William Shaw Carmichael, secretary to Lipton, Ltd., said the firm had been established twenty years, and the present was the first time a prosecution had been instituted against them.

The case was adjourned until February 9th, it being understood that in the meantime the sealed sample of butter in the custody of the Court would be sent to Somerset House for analysis.

At West London on Friday, January 13th, there was an adjourned summons against Evan Davies, of Dawes Road, Fulham, heard before Mr. Rose, in respect of butter sold to Inspector Manning, of the Fulham Vestry, found to contain 90 per cent. of margarine.—Mr. Blanco White appeared to prosecute, and Mr. Ricketts defended.—A question arose as to the form of the analyst's certificate, Mr. Ricketts contending that it was defective because it did not describe the composition of the margarine, which might contain butter.—Mr. Rose gave judgment against defendant on the ground that the certificate described the margarine as a foreign ingredient.—Mr. Ricketts then addressed the magistrate in mitigation of the penalty. He said a servant who was under notice to quit disregarded the instructions, although proper labels and paper wrappers were provided. She had instructions that when butter at a shilling a pound was asked for, to state that there was none, as pure butter could not be sold at the price. The same assistant repeated the offence after being warned.—Mr. Rose held that the defendant was responsible for the acts of his servant. He fined him £1 with 12s. 6d. costs in the first case, and 10s., with 2s. costs, in respect of each of the two other summonses dealing with the labels. Similar penalties and costs were imposed in the summonses relating to the second visit.

GREGORY'S POWDER.

At Derby, on January 10th, William Wilton Harvey, chemist, of Ford Street, was summoned under the Food and Drugs Act for selling Gregory's Powder which contained magnesium carbonite, instead of magnesium oxide. The Town Clerk prosecuted, and Mr. B. W. Moore defended, pleading not guilty. The case against the defendant was that when a Corporation official purchased an ounce of the powder at the defendant's shop he was given a packet of powder which contained 67 parts of magnesium carbonite instead of that quantity of magnesium oxide. In reply to Mr. Moore, the official in question admitted that Mr. Harvey told him when he sold him the powder that it had been made up for some time, and he could not guarantee it to be of proper strength or able to stand the usual tests. Mr. Wilkinson, Chief Sanitary Inspector, told the Bench that when he spoke to the defendant he admitted that he sold the drug as Gregory powder, and Mr. Cope, a chemist, stated that whereas magnesium carbonite only cost about 6d. a pound, magnesium oxide cost 1s. 6d. a pound. In answer to Mr. Moore, Mr. Cope admitted that it was his opinion that the carbonite was preferable to the oxide. In a great many cases the powder was made up as the defendant had done it. Mr. Moore argued that the powder was not sold to the purchaser's detriment, and in the witness-box the defendant said that he told the official that the powder would not withstand the usual tests because he had heard of similar prosecutions to this one, and knew the risk of selling his powder as the proper Gregory powder. The Bench dismissed the case.—Edward Machon, chemist, of Park Street, and Burton Road, was summoned for committing a similar offence on the same date. In this case the defence was that the powder was not sold as Gregory powder, but was labelled "Powder (Gregory)." The charge (4d.) would not warrant the stuff being sold as Gregory powder. In this case the magistrates convicted, imposing a fine of 2s. 6d., and £1 13s. costs.

GINGER.

EDWARD BROADHEAD, shopkeeper, Thurlstone, appeared before the Barnsley West Riding Bench on January 9th, charged with having sold adulterated ginger.—Mr. F. A. Reed, Huddersfield, said the case was an important one, as the adulteration of ginger was not well understood. The case would take a good deal of getting up, and he asked for a remand until the 23rd inst.—The application was granted.

THE SANITARY INSPECTORS' ASSOCIATION.**SIR JOHN HUTTON ON PUBLIC HEALTH.**

SIR JOHN HUTTON gave his "New Year" presidential address at a meeting of the Sanitary Inspectors' Association, held on January 7th at the Carpenters' Hall. He remarked that the total number of members was 685, and the whole of England was practically represented. Those resident in London might consider its sanitary administration was the most difficult of any place, forgetting that those labouring in large provincial towns often had to face questions of great magnitude. All reforms were costly, and were sometimes prevented by financial considerations. So vast a population as that of London was prolific of great sanitary dangers. The congregation of 4,484,717 persons in anything like sanitary safety was not a light accomplishment. The death-rate for 1897 was 19'4, considerably lower than that of Manchester and many other large towns. The prospect of every parish having its own dust destructor appeared to be imminent, the old method of having the refuse sorted and barged being full of danger and inconvenience. As regarded the seizure of unsound meat in London, the comparative smallness of the figures was due to the want of opportunity of efficient inspection, and the need of public slaughterhouses had been strongly urged by the medical officer of health of the London County Council. He trusted that the system for the inspection of meat would soon be perfected, not only in London, but in all large towns.

CREMATION ADVOCATED.

The public had been startled for the moment by the disclosures with regard to the manufacture of ice-creams, and recently with the condemnation of a large consignment of livers, but it awaited the next horror rather than increase the number of sanitary inspectors. It was with great satisfaction he noticed the increased use that was being made of coroners' courts and public mortuaries. Last year only 28 out of 7,428 inquests were held in public-houses. Mortuaries were not only used for cases of death from infectious disease, but for want of sufficient accommodation at home and for other sanitary reasons. For the poor to thus part with their dead had required years of education, and he hoped a sensible economy in funerals would follow, and that at no distant period cremation would be the universal method of disposal of the dead.

The association was naturally much interested in the constitution of the proposed Sanitary Inspectors' Examination Board, and they had some hope that their reasonable proposal would be accepted. He was glad to observe that the metropolitan salary list showed gradual if not quite satisfactorily increases. If sanitary inspectors throughout the country could be made to see that a powerful association could be useful to them in that and other ways, he thought the membership would increase with leaps and bounds. The questions of superannuation and security of tenure of office were always with them, and their case must be put again and again until they obtained their very reasonable demand. On the proper performance of their duties the health of London and the provinces very largely depended.

A hearty vote of thanks to Sir John Hutton was then carried.

WORCESTERSHIRE COUNTY ANALYST'S CERTIFICATES.

At Oldbury Police Court, on January 3rd, Thomas Bedworth, landlord of the "Bull's Head" Inn, Birmingham Street, Oldbury, was summoned for selling a quantity of gin not of the nature and quality demanded, it being alleged that it was two degrees under the proof allowed by law. Mr. Tyler (Birmingham) defended. Mr. Cecil Cook Duncan, public analyst for Warwick, said he was unable to give the exact percentages of water and alcohol, with the quantity of added water, as the same was insufficient for that purpose. Mr. Tyler said his client had come to answer the charge on its merits. He (defendant) had tested the same with a hydrometer, and also caused the sample to be analysed by Dr. Alfred Bostock Hill, public analyst for the county of Worcestershire and other counties. His report was that the gin was 33'45 degrees under proof, and was, therefore, over the minimum standard of proof required by law. He (Mr. Tyler) submitted that the certificate should have given the percentages of water and spirit, and therefore he contended that there was no case, as the certificate did not comply with that requirement. Mr. Heaton said the Bench had no alternative but to dismiss the case, as they considered the certificate as insufficient, and the evidence in support of it was also insufficient.—A number of other publicans were charged with similar offences, and Mr. J. S. Sharpe also defended. One of them said they had brought the public analyst for the borough of West Bromwich, who was prepared to say that the sample was only 32'7 degrees under proof, and therefore under the limit, although the Worcestershire county analyst's certificate alleged that the sample was 37 degrees under proof. All the other cases were withdrawn, as the official certificates were said to be the same as the first one.

THE FIGHT AGAINST CONSUMPTION.**NEED FOR NOTIFICATION.**

At a meeting of the Incorporated Society of Medical Officers of Health, held on January 13th at the offices of the St. Giles's District Board of Works, under the chairmanship of Dr. Gwynn, Medical Officer of Health for Hampstead, Dr. Newsholme, Medical Officer of Health for Brighton, read a paper on "The Prevention of Tuberculosis,

with special reference to Notification." Tuberculosis having been shown to be an infectious disease, it was supposed by many to be extended by direct personal infection. That was not necessarily the case. Differentiation should be made between diseases infective to all and those infective to the minority. Tuberculosis came under the latter category. Too much stress, however, should not be laid on that point. The difference between tuberculosis, typhoid, and scarlet fever was simply one of degree. Although a preponderating portion of the population enjoyed immunity from phthisis, many who died from other causes had what might be described as a scar from their fight against tuberculosis. If it was infective for the minority only, yet it was infective for a longer period. Compulsory isolation he regarded as out of the question, but thought voluntary isolation should be recommended. The relatives of patients were particularly prone to fall victims, and they should be removed from the home in which the patient had been treated. It had been urged against notification that before the disease was diagnosed the patient had been expectorating myriads of bacilli; and that the effort to destroy them could only have a partial success. This was a short-sighted reasoning. The prevention of disease was concerned largely with personal and environmental conditions. The chief predisposing causes were the habitual rebreathing of breathed air, dusty occupations, damp, dirt, darkness of dwelling houses, and habitual alcoholism—the last outside the scope of preventive medicine. He contended that the existing powers of local authorities in regard to the other matters were not large enough. One of the chief arguments against the compulsory notification of phthisis was held to be the risk of interfering with the patient's means of livelihood. But notification of disease was confidential, and if the medical officers were afraid of its use they could make regulations on the point. There need be no interference of the kind feared. But if any must suffer, ought it not to be the one rather than the many? If the propagandism of the association was to continue a certain amount of alarm among those imperfectly informed might ensue. But nothing could be more successful in removing unreasonable fear than the knowledge that cases of phthisis were notified to the medical officer who should have full authority with regard to any precautionary measure. He did not agree that notification was impracticable. Inspection and control of home and industrial conditions under which phthisis arose were of the very essence of prevention, and how could such control be exercised when they knew only a tithe of the cases, and those only when they had proved fatal? He commented on the fact that while lead poisoning and some other non-communicable diseases must be notified, no such necessity existed in the case of phthisis, which was communicable and had its victims in thousands. He protested against the obstructive attitude of the Local Government Board, and in conclusion, urged the desirability of representations being made to that body to allow at least the same local option with respect to notification of phthisis as was given in other infectious diseases.

THE PREVENTION OF CONSUMPTION.

DISCLAIMER BY THE PRINCE OF WALES.

It will be remembered that at the recent meeting at Marlborough House, presided over by the Prince of Wales, at which the National Association for the Prevention of Consumption was inaugurated, it was stated by Sir William Broadbent that they had memorialised the London County Council on the need for the replacing of private slaughter-houses by public abattoirs as calculated to assist in the arrest of tuberculosis. It was reported in the Press that at a Committee and Council meeting of the Smithfield Club, held a few days previously, a resolution was adopted—confirmed subsequently at a general meeting, "amid loud cheering"—condemning the establishment of public abattoirs as "unnecessary and inexpedient," and that the Prince of Wales, in putting the resolution to the general meeting, said "he had no doubt the resolution would be received in the same favourable

way by that general meeting." Relying upon the accuracy of those reports, a number of newspapers deplored the fact that His Royal Highness should have taken sides with trade interests as against the London County Council, the recommendations of the Royal Commission on Tuberculosis, and the whole of the medical opinion of the country. The attention of His Royal Highness having been drawn to these reports, he has communicated with the editor of the municipal journal, the *Councillor and Guardian*, to the effect that he was not present at the meeting of the Council of the Smithfield Club when the resolution in question was carried, nor did he express views of any description at the general meeting when the resolution was brought forward for confirmation, but, as the Chairman, he had, necessarily, to put the resolution to the meeting, but he did so without a single word of comment.

SOMERSET COUNTY COUNCIL AND FOOD AND DRUGS.

THE county analyst (Dr. H. J. Alford) has reported that out of 288 analyses during the quarter only nine articles were adulterated, and these were not prejudicial to health.

CORRESPONDENCE.

SCHEME TO IMPROVE OUR FOOD SUPPLIES.

To the Editor of FOOD AND SANITATION.

SIR,—For some years I have received the valuable assistance of the Press in my endeavours to arouse the public concerning the very dangerous position, owing to defective food supplies, we should be in were we engaged in war. Owing to various reasons, I have to a large extent avoided placing a definite scheme before the public. The time to do so appears to at last have arrived. My definite scheme is as follows: The nation to remunerate our wheat growers when the average price of wheat is below 40s. per qr. in any year by paying them sufficient the next year to return them about 40s. per qr., and to lend them money on their wheat stacks. The remuneration to be paid in two instalments; the first on the acreage harvested, and the second on the number of quarters threshed. The growers, in return, to undertake to reserve their wheat in the stack for at least six months, and to be prepared to sell the grain at a fixed price should such a course appear in the best interests of the nation. The price of bread to be fixed according to that of flour, which shall be ruled by the price of wheat. The revenue to pay our growers for preserving their wheat, to be chiefly obtained by 10 per cent. import duties on all foreign manufactured articles, including flour, if the importation of this be not prohibited. Should the price of wheat be below 32s. 6d. per qr., import duties on foreign wheat to be levied corresponding to the amount that wheat is below that price, and the revenue thus obtained to be used in helping to pay our growers for reserving their wheat. By these means the price of wheat should be about 30s. per qr., that of flour 24s. per sack, and the 4lb. loaf 5d. The remuneration would cause wheat to be cheaper, and the import duties on foreign wheat would prevent the price falling to a very low figure. The above scheme cannot be described as protection, which is any fiscal arrangement that causes an increase in the selling price of an article in the country in which it is produced. My scheme would tend to cause a decrease in the selling price of bread in this country. May I ask all who love their country to place their views on this question, previous to the opening of Parliament, before their representatives in Parliament, the Marquis of Salisbury, and the Earl of Rosebery. Our Statesmen are unaware of the views of the nation concerning our food supplies, and unless informed in a clear manner may let the matter drift until too late. All writing to our statesmen may help to cause the Government to appoint early next month a Royal Commission to inquire and report concerning our food supplies, then something will surely be done to place us in a more secure position before too late.—Yours, etc.,

THOMAS G. READ.

31, Cavendish Square, January 10th.

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Food and Sanitation.

SATURDAY, JANUARY 28TH, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

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ADULTERATION OF FOOD.

MR. LONG PROMISES A BILL NEXT SESSION.

SPEAKING on January 23rd at a Unionist meeting at Bath, Mr. Walter Long, M.P., said there had been a great deal of complaint about the adulteration of some of the food products sold in this country, and in regard to a portion of this subject—those food products which were grown by British farmers—he had during the Session to introduce a Bill which he hoped would reduce adulteration. He had been very much struck in the course of the exam-

ination he had had to make into the subject by this fact. He had been told by many people that this was a question which only interested the British farmer, and it came from no other source than the agricultural interest. His experience pointed in a totally different direction, for he had been approached by traders of all kinds, and from various commercial associations far more than from agricultural interests. He was assured by them that there was wholesale adulteration going on in the country, and he believed there was great truth in the statement. He was asked to apply most drastic remedies.

ALL STATEMENTS ON ONE SIDE.—It was a remarkable fact that all statements which had been made were on one side. So far, no voice had been raised on the part of the adulteration. No one had suggested that there was another side to the question. Every assertion was to the effect that there was a great deal of fraud being perpetrated. He was satisfied that that was not a state of things that ought to be allowed to continue, and it was the intention of the Government to introduce, through himself, a Bill in the coming Session which he hoped would enable them to deal satisfactorily with the question. He had referred to it in the hope that possibly if there was anything to be said from another point of view his words would lead someone to show that the case was not so black as painted to him. At present it seemed likely that the case would go by default, for the defendant did not appear.

THE DANGERS OF MILK.

SIR CHARLES A. CAMERON, M.O.H., Dublin, writes: "That tuberculosis is not infrequently communicated to man through the medium of the milk of tuberculous cows is no longer open to doubt; therefore the hygiene of the dairy must be regarded as a matter deeply affecting the health of the population. The vast majority of the consumers of milk have no assurance that it is the secretion of healthy cows; and in this uncertainty the use of 'sterilised' milk is prudent. There are, however, many persons, including the present writer, who drink raw, in preference to cooked, milk, even at the risk of using an infected article. There are millions who drink milk quite unconscious of the existence of the 'bacillus tuberculosis' or of the sterilisation of milk. Nature has intended milk to be used uncooked, for in that form is it not drunk by the infants who are not 'artificially' fed? In raising the temperature of milk to a point sufficient to ensure the destruction of disease-giving micro-organisms and their spores the flavour and physical constitution of the fluid are altered, so far as the former is concerned not for the better.

"The hygiene of the dairy herds of these countries should be under the direction and strict supervision of a public department. For this purpose the Board of Agriculture is probably the most suitable. The sanitary authorities are empowered to make regulations for the keeping of animals and for the storage and sale of milk, but they are practically only enforced in urban districts. Even in these there is but little systematic inspection of cows with the view of ascertaining their freedom from disease.

"The danger from infected milk would be immensely lessened by the adoption of the following measures: (1) The inclusion of tuberculosis amongst the maladies notifiable under the provisions of the Contagious Diseases (Animals) Act. (2) Compensation to be given to the owners of cows slaughtered because their udders were affected with tuberculosis, or because they were seriously affected by tuberculosis. (3) Application of the tuberculin test to all the dairy cows in town or country. (4) Strict supervision to ensure the proper housing of cows and storage and conveyance of milk. The dairy farmers and cow-keepers are threatened by a serious competition from France; it is, therefore, to their interest that the 20 millions of people who reside in English towns should be induced to prefer home-produced rather than foreign milk, and that can only be done by the adoption of the best means to secure the purity of the home-produced article."

WATER AT SPIRIT PRICE.

At Lowestoft, on January 23rd, Mary Ann Lawry, of the "Three Herrings," High Street, Lowestoft, was summoned at the instance of Mr. Philip Kett, Inspector under the Food and Drugs Act, for selling adulterated whisky.—The Town Clerk (Mr. R. B. Nicholson), appeared for the prosecution, and Mr. Harold Chamberlin for the defence.

The Town Clerk said the defendant was charged with having sold to Inspector Kett one pint of whisky, which on analysis proved to be 33·3 under proof, the lowest legal strength being 25 under proof.

Philip Kett said he went to the "Three Herrings" on the day named, and saw his assistant, Charles W. Edwards there, asking for a pint of brandy, which Mrs. Lawry was about to give from a pint-and-half bottle. Edwards said, "I didn't want it out of that bottle, but that which you draw for your customers." She said her brandy was off, and witness then said, "Never mind then; I'll have a pint of whisky out of the glass barrel on the counter." He paid 2s. 8d. for it, and divided it into three parts for the purpose of analysis.—Cross-examined by Mr. Chamberlin, witness said he saw no notice in the bottle or jug department (into which he went) to the effect that the whisky sold there was diluted.—Re-examined: He looked for the notice alluded to.—Chas. Edwards also said he looked for the dilution notice, but did not see it.

Mr. Chamberlin contended that proper notice was given in the open bar that the spirits sold there were diluted, and Mr. Kett might have seen it if he had used due diligence.

Wm. Lawry said the notice was posted 2½ feet from the tub from which the whisky was taken, and Mr. Kett could have seen it if he had chosen. Witness thought whisky 33·3 under proof was of very fair strength at the price—2s. 8d. a pint. A person would have to put his head through the wicket to see the notice. Mrs. Lawry said the Inspector said nothing to her as to what he was going to do with the whisky, and certainly said nothing about "public analyst."

Defendant was fined £2, including costs.

At Birmingham, on January 21st, the inspector under the Food and Drugs Act (Mr. W. H. Clarke) summoned Alfred Barton, of the Royal Exchange Vaults, Victoria Street, for an offence against the Food and Drugs Act, it being alleged that he had sold whisky adulterated with water to a greater extent than the 25 per cent. under proof permitted by law. Mr. Maddocks defended. The Inspector said that after he had purchased a sample of whisky, and intimated the object of its purchase to the defendant, the latter opened the door of the bar-parlour and showed him a notice to the effect that all spirits sold on the premises were reduced, but not below half-proof strength. But this notice was not conspicuous to customers in the bar. The whisky proved, on analysis, to contain 13 per cent. too much water. For the defence, it was urged by Mr. Maddocks that the notice in question could not be otherwise than seen by customers, and eventually the Bench dismissed the summons, though they deemed it proper that the circumstances should have been brought before them.—In a case of a somewhat similar character brought against Samuel Rollason, of the "Leopard Inn," the Town Clerk assented to the withdrawal of the summons on payment of costs, believing that an error had been committed by a servant of the defendant without his knowledge.

At Ilkeston Petty Sessions Thomas Mee, manager of the Railway Hotel, Hallam Fields, was summoned at the instance of Captain Sandys, inspector under the Food and Drugs Act, for selling half-a-pint of whisky, which was 33·3 degrees under proof. Defendant was also summoned for selling half-a-pint of gin on the same day which was 41·6 degrees under proof. Mr. J. Ormond, solicitor, appeared for the defence, which was that the hydrometer was out of repair, and did not register the strength accurately. Defendant was only the manager of the hotel, which belonged to the Stanton Ironworks Company, and could have no object in adulterating the liquors. The liquor was obtained from a Derbyshire firm, and was of the best quality. Mr.

E. Repton, secretary to the Stanton Ironworks Company, said it was a matter of great regret to the directors and himself that such a mistake should have occurred. They wanted to supply their men with the best liquor that could be obtained. The house was kept for the convenience of the workmen, and the profits were not taken into consideration. The Mayor said the Bench were of opinion that the company did not wish for anything of the kind to have occurred, but, as one of their officials had committed the offence, they were bound to convict, and a fine of 6d. and costs would be imposed in each case—in all £2 5s.

JANET SIVITER, landlady of the "Plough and Harrow" Inn, Rombow, was summoned at Halesowen for selling adulterated whisky.—It was stated on behalf of the police that on the 7th ult. the defendant sold as genuine whisky a spirit which was nine degrees under the recognised standard, and consequently the customer was defrauded.—Evidence in support of the allegation was given; and for the defence it was stated that owing to the illness of the defendant and her daughter, a girl, 15, was instructed to break down the strength of the whisky, and unfortunately she used too much water.—Mr. Garratt said defendant had evidently conducted her business in a careless manner in entrusting a girl 15 to look after the spirits.—The defendant was fined £2 3s. 6d.

At Eastbourne, on January 20th, Robert Campbell, proprietor of the Royal Restaurant, Terminus Road, was summoned for selling, on December 21st, to the prejudice of the purchaser, a certain quantity of gin which was diluted with water so as to reduce the strength below 35 degrees under proof, namely 37·5 degrees under proof, contrary to the Food and Drugs Act, 1875.—The Town Clerk (Mr. H. W. Fovargue) prosecuted.—Defendant admitted the offence.—The Town Clerk said the gin was sold to Mr. John Henry Ollett, inspector under the Food and Drugs Act, while he was taking other samples. The gin was sent to the public analyst, who certified it to be 37·5 degrees under proof, caused by the addition of water. It was really 2·5 degrees below that allowed by the statute.—Defendant said he had not the remotest idea that anything was wrong with the gin. The same day that Mr. Ollett took the sample he had to discharge one of his barmaids because she had taken to drink. The portion of gin diluted was contained in a small decanter. They only "broke down" the spirits in small quantities.—Mr. Ollett said he took a sample of whisky at the same time and that was certified genuine.—Defendant said he was exceedingly sorry. It was, of course, contrary to his interests that such a thing should happen.—The Chairman: You are responsible.—Defendant: Oh, yes; I am responsible.—After the Bench had convicted Major Molineux said they quite thought defendant's explanation was a reasonable one, and they also thought it was probable the gin was diluted in the manner suggested. Defendant must understand, however, that he was responsible, and they inflicted a fine of £1 including 14s. 6d. costs.—The Clerk (Mr. E. O. Langham): There will be no endorsement on the license? Major Molineux: Oh, no.

At Hull, on January 17th, William Lister Bower, of the "Plimsoll Ship" Hotel, Witham, was summoned for selling whisky reduced from 25 degrees under proof to 34·57 degrees under proof by the addition of 12·76 per cent. of water.—The Town Clerk prosecuted, and Inspector Rowland gave evidence.—Defendant said he was a new tenant, and he had since tested the spirits himself, and found that they were below proof to the extent stated by the Inspector. He considered in this he had been robbed by the outgoing tenant. A fine of 20s. and costs was imposed.

At Castle Eden Petty Sessions, James Scott, of the "Trimdon Grange" Inn, was summoned by Mr. B. Scott Elder, inspector of food and drugs, for having sold whisky, to wit, one pint which on analysis was found to contain 33·70 per cent. under proof, whilst only 25 per cent. under proof was the legal strength. The whisky was sold by the landlady.—Defendant pleaded guilty, and a fine of £2 and costs was imposed.

At Reading, Richard Habgood, of the "Star and Garter," Friar Street, was summoned for selling whisky 28·1 degrees under proof. Mr. H. A. Millington (Deputy Town Clerk) appeared for the prosecution and Mr. Shaw for the defence.

Mr. Henry Wright, Inspector under the Food and Drugs Act, said that on December 7th he visited defendant's house and purchased for analysis half a pint of Scotch whisky, for which he paid 1s. 4d. Mrs. Habgood served him. Dr. Ashby gave him the certificate produced. In cross-examination witness said he had known the defendant a great number of years. He had not taken any sample of spirit from defendant before. Mrs. Habgood took the whisky from a glass urn, but he could not say whether there was a stopper in it.

Mr. Shaw, for the defence, pointed out that the Act allowed the spirit to be under proof to the extent of 25·0, so that there was very little difference. He accepted the certificate of Dr. Ashby, and the only way defendant could account for the discrepancy was that he had been unwell for three days, and therefore had not been able to fill up the urn as he usually did every day. The result was that when the inspector called and took the sample the whisky had been reduced in quantity to about the bottom of the urn. When a vessel of spirits got low, and was not absolutely air tight, a certain amount of spirit was absorbed by evaporation. Defendant had been a licensed victualler for thirty-six years, and occupied his present house for fifteen years. Samples of his spirits had been taken before, and there had been no complaint against him.

Dr. Ashby, called by the Bench, stated that the evaporation of the spirit would be caused only through carelessness, as publicans knew how to prevent it.

The Bench reserved their decision until they had heard another case.

MARK R. MORRIS, of "The Anchor," London Street, was summoned for selling whisky 29·38 degrees under proof, on January 9th.

Mr. Millington handed in the analyst's certificate.

Mr. Robert Simmons, who appeared for the defendant, said he accepted the certificate, and on behalf of defendant pleaded guilty. Mrs. Morris put the water to the whisky on this occasion, but the defendant was responsible for his wife's actions. She had always been in a house that was not fully licensed, and, therefore, knew nothing about the adulteration of whisky. Having no one to consult, she thought she was doing right in putting in a certain quantity of water. Defendant tendered his sincere apology, and would take care it did not occur again.

The Bench having consulted, the Chairman pointed out that, according to the Act, it was not necessary to prove guilty knowledge on the part of defendants, and therefore it was more incumbent upon them to see that there was no adulteration. The maximum penalty was £20. Habgood would be fined £3, and 18s. 6d. costs; in default, fourteen days. They looked upon the other case as worse, for there had been utter carelessness, and Morris would be fined £5, and 18s. 6d. costs; in default, fourteen days. The licenses would not be endorsed.

MEAT.

At Guildhall, London, before Alderman Sir Marcus Samuel, Thomas Bird, a labourer, living at Adelaide, Ely, Cambridgeshire, was summoned for that the carcases of two pigs belonging to him, which were in a diseased condition, were deposited in the Central Meat Market for the purpose of sale. Mr. Vickery, solicitor, who prosecuted on behalf of the Corporation, said that the defendant had two pigs which were in a bad condition. After consulting a butcher, he had them killed and sent to London. He acted, it appeared, under the advice of the butcher, a man named Cross, to whom he owed money. Dr. Saunders, the medical officer of health for the city, said that the eating of such meat was likely to cause death. It was remarked that the defendant had partaken of the lights. The doctor said it was surprising what some people ate. Cross gave evi-

dence, and said that he ordered his man to kill the pigs and send them to London. Sir Marcus Samuel imposed a fine of £5 and £4 4s. costs. He disallowed the costs of the witness Cross. The defendant, not having the money, was about to be removed to the cells, when Cross stepped forward and said that he would be answerable for the fine. Sir Marcus Samuel: I think you have acted in a very proper manner. I shall give you seven days in which to pay the amount. Bird was then released.

MILK.

At Coventry on January 21st, a Pinley milk dealer, John Smith Hall, was summoned to answer a complaint of milk adulteration. He was represented by Mr. Maddocks, the Town Clerk conducting the proceedings initiated by the Inspector under the Food and Drugs Act (Mr. W. H. Clarke).—The defendant's excuse was that he ran short of milk when on his round, and bought a supply from other dealers, a portion of which constituted the sample taken by the inspector.—The Bench, however, took into consideration that defendant had been previously before the Court for like offences, and fined him £5 and costs.

At Liverpool, on January 18th, John Wilkinson, milk dealer, Townsend Lane, for whom Mr. Christian Jones appeared, was fined £3 and costs for selling as new milk to which six parts of water had been added to every 100 parts of the poorest milk, which had also been deprived of part of its cream. The defence was that the milk was not defendant's own, but was some that he had purchased to eke out his own, which was insufficient for his round. Mr. Stewart said defendant should have got a written warranty, no matter how small was the quantity he purchased. John Simm, milk dealer, Howat Street, was fined 20s. and costs for selling as new milk which had been deprived of part of its cream.

At Glasgow, on January 17th, William Patrick, dairyman, 23, Surrey Street, was charged with having, on the 10th November last, sold to a sanitary inspector 1d. worth of sweet milk, which, on analysis, was found to be deficient in natural fat to the extent of 14 per cent. He pleaded guilty, and explained that his supply of sweet milk was almost finished at the time, four o'clock in the afternoon, when the inspectors came in, and he accounted for the deficiency by previous sales from that supply. Mr. John Lindsay, who prosecuted, stated that the can from which the inspectors were served contained about two pints at the time of the sale, which was not four o'clock in the afternoon, as alleged by the defender, but before noon. The Sheriff stated that the explanation given by the defender was not satisfactory, and apparently not correct, and he thought the case called for a sharp penalty. The fine would be £5 3s. 10d., to include expenses.—Thomas Brand, dairyman, 875, New City Road, admitted having sold to a sanitary inspector a pennyworth of sweet milk which the public analyst had found to contain 6 per cent. of added water. Respondent said he had been twenty years in business, and during all that time he had never put a drop of water in milk. No water was added in his shop. The Sheriff: Have you a guarantee of purity along with your milk supply? Respondent: No, my lord. The Sheriff: I think you would find it a great protection. Mr. Lindsay said he was surprised that Mr. Brand, who had been twenty years in business, had not a guarantee with his milk supply. If he had had one that day the party who supplied him, and not the respondent himself, would have been before the Sheriff. A penalty of £6 3s. 10d., inclusive of expenses, was imposed.

At Otley on January 20th, Thomas Mackereth, farmer, of Baildon, was fined £5 and costs for selling adulterated milk which contained 86 parts milk and 14 parts added water. Some of this milk he had supplied to two other dealers, who were both similarly charged. Their own milk, however, was all right; but that supplied by Mackereth was not. On these grounds they were dismissed on paying costs. The Chairman said a great deal of adulterated milk was being sold up and down the country.

BEFORE Sheriff Orphoot, in Edinburgh Police Court, on January 18th, John Linklater, dairyman, appeared on a charge of refusing to sell from his van twopence worth of sweet milk to Robert Beveridge, an Inspector under the Food and Drugs Act, 1875, contrary to Section 5 of the said Act, the milk being required for the purpose of analysis. The accused pleaded not guilty, and Mr. Peter Morison, S.S.C., appeared on his behalf. Mr. Morison, in his preliminary statement, said that the inspector came forward and asked his client for twopence worth of milk. Mr. Linklater did not sell milk by retail at all. He had not a measure for twopence worth of milk, but when pressed to sell he gave the inspector a quantity of milk in a cream measure. His client, on learning that his customer was an inspector, was afraid of a prosecution under the Weights and Measures Act, and he asked and got back the milk. His lordship held that a technical irregularity rather than a deliberate breach of the statute had been committed, and he imposed a fine of £1, with costs, or seven days' imprisonment.

At Glasgow, on January 17th, William Patrick, dairyman, Surrey Street, Glasgow, was fined £5, including £2 expenses, for selling to a sanitary inspector sweet milk which was deficient in natural fat or cream to the extent of 14 per cent. It was stated that the shop was in a working-class district.

At the same court, Thomas Brand, dairyman, New City Road, was fined £6, including £2 expenses, for selling milk which was found to contain 6 per cent. of added water. The defender stated that he had been twenty years in business and had never put a drop of water in his life. He had no guarantee with the milk in question.

At Paisley, on January 17th, Sheriff Henderson heard a complaint at the instance of Mr. W. W. Kelso, sanitary inspector for the Burgh, against Mrs. Reid, 3, Neil Street, Paisley. The complaint was that the respondent had sold twopence worth of sweet milk to the sanitary inspector, which milk, on analysis, was found to contain only 1.36 per cent. of natural fat, being, therefore, deficient to the extent of 50 per cent. Accused pleaded not guilty.

It appeared from the evidence that when this milk was sold it was represented to be the milk of one cow, and the inspector arranged with the party to go back in the afternoon when the cow was being milked and see it milked, and get a sample of the milk direct from the cow. When he called as arranged, he was told the cow had been milked, and a quantity offered to him out of a dish, the dairy-keeper saying that she would swear that it was the same cow's milk. Although this did not satisfy the inspector, he took a sample of it. The result of the analysis of this sample showed it contained 3.76 per cent. of natural fat. Arrangements were again made to get a sample direct from the cow on the following morning, but when the inspector called he was informed that the cow had been sold and was away. Evidence was also heard from Dr. Clark and Mr. Tatlock, analysts, Glasgow, regarding the variations in different cow's milk, and at different milkings, in which these gentlemen were not at all agreed. Mr. Tatlock held that no one was justified in saying that milk falling as low in fat as 1.36 was not the genuine milk, as there was a case known where the fat of one cow had fallen as low as 1.1 per cent.

The Sheriff said that he was satisfied, from the evidence, that this milk had been tampered with in some manner. He could not believe that any one cow's milk could vary so much as from 1.36 to 3.76 in such a short time, and in any case the chances of genuine milk being so poor were so exceedingly remote that the public must be protected against the risks of opening the door so easily to adulteration, than taking such poor milk as a standard. He imposed a fine of £4 or twenty-one days.

Mr. William Walker, writer, appeared for the complainer, and Mr. Benjamin Lang, writer, for the respondent,

A SHERIFF ON THE LAW RESPECTING MILK ADULTERATION.

At Dunfermline, on January 17th, Joseph Easson, dairyman, Sheepphouse Well, Dunfermline, was charged with having sold to one of the sanitary inspectors of Dunfermline a pennyworth of sweet milk which, on analysis, was found to have had 9 per cent. of its natural fat abstracted. Professor Ivison Macadam, who was the principal witness for the prosecution, stated that the analysis of the sample of milk showed the total solids to be 11.51 per cent.; fat, 2.48; solids not fat, 9.03; ash, 0.70. The Somerset House standard, which he regarded as low, set forth that genuine milk should have at least 2.75 per cent. of fat. The evidence for the defence was that the accused had bought two gallons of milk from another party and mixed it with a smaller quantity of milk from his own dairy. That was just before the sample was drawn for the sanitary inspector. Sheriff Gillespie said that the law on the milk question was in a very unsatisfactory state. The Legislature might have taken the intelligible course of fixing a standard of fat below which milk would not be sold. They had not, however, done so, and although there were difficulties—by no means insuperable—in the way, it was desirable that they should do so. In the absence of any such statutory standard the Court of Justiciary had laid down that it was a question of fact in every case whether the milk had been tampered with. The low percentage of fat in this case was such as to throw upon the accused the burden of rebutting the inference that the milk had been tampered with, but, having heard the evidence, he was not prepared to say that the inference was so strong as to convince him that the evidence for the defence was false. The result was practically this, His Lordship added, that convictions could not be obtained unless in flagrant cases. He quite saw that the law lent itself to great evasions, but those who desired reform must go to Parliament and not to the Courts. He found the charge not proven.

DANISH OR DUTCH BUTTER.

IMPORTANT MERCHANDISE MARKS CASE IN LEEDS.

THE Leeds Stipendiary Magistrates (Mr. C. M. Atkinson) was engaged, on January 19th, hearing an important case under the Merchandise Marks Act in which Messrs. Van Straughton and Zoon (Limited), foreign produce merchants, of 20, New Station Street, Leeds, and also of Manchester, were summoned at the instance of Mr. Harold Faber, Agricultural Commissioner in England for the Danish Government, on charges of having sold butter to which a false trade description had been applied.

Mr. Bonsey, barrister (instructed by Messrs. Robinson and Stannard, London, solicitors to the Danish Government), prosecuted, and the defendant company were represented by Mr. C. P. McKeand (instructed by Mr. F. O. S. Leak, solicitor, Manchester).

In the opening proceedings Mr. Bonsey remarked that part of Mr. Faber's duty as commissioner was to see that Danish produce was not dealt with fraudulently. Large quantities of Dutch, Danish, and Finland butter were imported, and of these the Danish produce commanded the highest price. It was in consequence of the number of prosecutions for butter adulteration that Mr. Faber's attention had been drawn to the matter, and, instead of dealing with the retailers, he had decided to proceed against certain wholesale firms. The charge on that particular summons was taken under sub-section 2 of the Act. It appeared that on November 25th, a Mr. Suggitt, grocer, of 129, Camp Road, purchased a cask of butter from the defendants at the instance of Mr. Faber. The cask, which was marked, "Choicest Selected Danish Produce," was taken to the shop of a Mr. Bosomworth, and was subsequently examined by two or three people in the trade of very large experience, and these experts would state that they could tell, not only by the taste but by the cask, that this was Dutch butter. It appeared that Dutch butter came over in weights of 1 cwt. This did not vary

by more than perhaps a pound, for the casks were not filled as in the case of Danish butter. Another peculiarity was that casks of Dutch butter were nearly always marked "Dutch Produce" somewhere about the centre of the cask. In the case of the cask in question it was apparent that something had been scraped from the lid where the words "Dutch Produce" might have been expected. Mr. Bonsey, in conclusion, asked for a substantial penalty.

Evidence was given by experts as to the butter being Dutch, and Mr. Robert Bospmworth, grocer, of 57, Great George Street, Leeds, pointed to the marks of scraping on the lid of the cask, remarking that it was here the words "Dutch Produce" might have been expected.

Mr. Harold Faber stated that the defendant company had been fined at Leith and Manchester under the Food and Drugs Act.

Mr. McKeand pleaded guilty, but pointed out that the defendant company had already been fined in other courts something like £100, and had paid a similar amount in costs for offences committed at about the same period as those now under consideration. From the time when the last conviction had taken place the company had conducted their business in a proper legal manner, and had not offended against the Act of Parliament.

The Stipendiary Magistrate remarked that the imposing of penalties on this company would probably have produced a marked alteration in their method of doing business. He imposed a fine of £10 and 20 guineas costs in the case dealt with; and on three other summonses fines of 40s. and 10 guineas costs were inflicted. Four further summonses were withdrawn on payment of costs.

MARGARINE.

At Wolverhampton, on January 23rd, the International Trading Company, who have a branch shop in Dudley Street in that town, were summoned by Mr. G. F. Allwood (the inspector of food and drugs) for exposing margarine for sale without a label, and, further, for selling adulterated butter, and selling margarine in a paper not properly marked. Albert Lee, an assistant in the company's employ, was also summoned for selling adulterated butter. Mr. Eli H. Burnes, the local manager, appeared for the company.—The case for the prosecution was that half a pound of tenpenny butter was purchased from Lee, and was found to be margarine, containing only 28 per cent. of butter. Neither the article in the shop nor the quantity purchased was labelled as margarine.—For the defence it was stated that a mistake had been made owing to some margarine having been inadvertently placed on the butter slab.—In reply to the stipendiary, Mr. Allwood said there had been two convictions against the company in Birmingham.—The stipendiary characterised the case as a bad one. On the company's wrapper it was stated that they were "acting directly for the farmers and growers, thus saving all intermediate profits." He thought the object of such a statement was to delude the public. The case, it was said, had arisen through a mistake, but it was singular he had never yet found an instance of butter being sold for margarine, and the mistakes were invariably in favour of the vendor. He thought the whole thing was a fraud.—Albert Lee was fined £5, and the company were fined £10 and the costs for exposing margarine without a label, and the other summonses were withdrawn on payment of the costs.

At Castle Eden petty sessions John Cook was charged in three instances with breaches of the Margarine Act.—The prosecutor was Mr. B. Scott Elder, chief inspector of food and drugs.—Mr. I. Isaacs defended.—Mr. Elder said in evidence that on December 16th last he was purchasing samples at Trimdon Grange, and saw in the window of defendant's shop several packages of what appeared to be butter. A ticket, on which was printed "6d.," was attached to one of the packages. Witness entered the shop, and asked the attendant, named Thompson, what price the butter was. The assistant replied 1s. 3d. Witness asked if he had any other, and the assistant replied, "Yes, the

sixpenny." Witness then asked if that was the same as shown in the window. The reply was, "Yes." Witness bought a pound of the "sixpenny butter," which was served to him in plain white paper, which in itself was an offence. Witness divided the mixture into three parts in the usual way, leaving one at the shop, returning another, and sending the third to the county analyst at Darlington. Thompson said in reply to witness that he had served his time with Mr. Cook. Witness noticed about twenty other packages similar to those in the window, and asked the assistant outright if they were butter? He replied, "Sixpenny. Of course it is margarine, and what you have got is margarine." Witness asked where the margarine labels were, and was told they had none, nor had they any printed wrapping papers. Thompson said that his master and himself had put up the packages that morning. Mr. Cook was then at the other shop. Witness purchased a second pound for which he paid sixpence. Mr. Isaacs, in reply to Mr. Elder's evidence, contended that it was never intended by his client the packages should be sold as butter. In fact anyone might know that a pound of butter could not be sold for sixpence.—The bench fined defendant 20s. and costs in the first case, 5s. and costs for serving margarine in an unstamped or unprinted wrapper, and 5s. and costs for not having the margarine labelled.

At Leeds, on January 17th, a summons under the Food and Drugs Act, against Charles Whittle, grocer, of 80, Charles Street, Leeds, was heard by the Stipendiary Magistrate (Mr. C. M. Atkinson), at the Leeds City Police Court.

Mr. W. B. Walker, Inspector of Food and Drugs, who prosecuted, said that on December 17th last he went into defendant's shop and purchased a pound of what purported to be butter from a lump behind the counter. There were three lumps of margarine properly labelled in the shop, but the material supplied to him bore no label.

Mr. E. H. Foster, who defended, said that defendant had run short of butter on the day in question owing to an expected consignment of Irish butter not arriving, and 4lbs. had been purchased from the nearest dealer. The price paid was 9½d. per lb. No invoice was furnished at the time, but the dealer gave one when requested to do so on the following Monday.

A fine of 20s. and costs was imposed by the stipendiary magistrate, who remarked that the Act was directed against careless as well as fraudulent persons.

SEIDLITZ POWDERS.

At Castle Eden Petty Sessions, John Cook was summoned by Mr. Elder for selling seidlitz powders which, when analysed, were certified to be deficient in tartaric acid to the extent of 30 per cent.—Mr. Isaacs again defended.—In opening the case, Mr. Elder said that as it was the first prosecution of the kind in the county, he would ask the Bench to deal leniently with the defendant, if convicted, and inflict payment of the costs in the case only. Mr. Elder explained that every seidlitz powder ought to contain tartaric acid to the extent of 38 grains, according to the British Pharmacopœia. Mr. Elder then gave evidence of purchasing six seidlitz powders at defendant's shop on December 16th, for which he paid 6d. The powders were divided into three parts, one of which was submitted to the county analyst, whose certificate, certifying a deficiency of 30 per cent. of tartaric acid, was put in as evidence. The other was genuine.—Mr. Isaacs, for defendant, thanked Mr. Elder for the lenient manner in which he had laid the case before the Bench. His client did not seek to deny Mr. Elder's evidence, but wished him to say that a letter had been received from the wholesale makers, saying it was such a long time since the powders were bought that they could do nothing in the matter.—The Chairman said he was very glad Mr. Elder was giving attention to these powders, which were largely used and relied upon by country people. As Mr. Elder

had, with his usual courtesy, asked the Bench to deal leniently with defendant, a fine of 1s. and costs only would be inflicted.

Andrew Young, general dealer, of Trimdon Grange, was also charged with the sale of seidlitz powders, two of which, on being analysed, were certified to be wanting in tartaric acid to the extent of 28 per cent. and 14 per cent. —Mr. Elder also said that since the issue of the summons against the defendant the wholesale makers had informed him that they had tested the other powders left, and found them deficient in the proper quantity of tartaric acid. They had agreed to call in the powders they had supplied, and to give instructions to their staff to be careful in future. Under these circumstances, Mr. Elder said that on the conviction of defendant he would be satisfied with the payment of costs only. Defendant was not to blame.—A fine of 1s. and costs was imposed.

UN SOUND AMERICAN HAMS.

At West Ham, on January 23rd, Mr. Spadaccini, one of the food inspectors of the Port of London Sanitary Authority, applied to Mr. Baggallay for an order of the Court to authorise him to destroy 310 putrid American hams which had been brought from Boston by the steamship *Megantic*. The hams were in six large cases, which were marked "Nosegay Brand," and were brought to the Court in a van—Dr. W. Collingridge, the Medical Officer of Health for the Port of London, described the hams as absolutely unfit for food, and Mr. Baggally, having inspected the cartload, granted the order.

EUCALYPTUS OIL.

At Clerkenwell, on January 18th, Messrs. Lewis and Burrows' Drug Stores (Limited), of 22 and 24, Great Portland Street, were summoned by the Islington Vestry for selling on the 7th December oil of eucalyptus that did not conform to the requirements of the "British Pharmacopœia."—Mr. Bramall appeared for the Islington Vestry, and Mr. R. H. Germain, barrister, defended.—A bottle of the oil was purchased at 274, Seven Sisters Road, Holloway, one of the defendants' shops, on the 17th of December. A sum of 1s. 3d. was paid for four ounces. The usual division took place, and a sample was submitted to Dr. Teed, public analyst, who returned it as of a less specific gravity than required by the "British Pharmacopœia," as containing phillandrene, and being without cineol.—For the defence it was submitted that the oil sold was not eucalyptus globulous, the standard of test laid down by the "British Pharmacopœia," but that it was eucalyptus amygdalina, an oil of eucalyptus which was included in the "British Pharmacopœia" of 1885. It was argued by Mr. Germain that the oil was not sold for the purpose of compounding, but as a deoderiser; that it was sold as an article of commerce, as distinct from a drug to be used in compounding a medicine.—Mr. Horace Smith said the oil sold was not that prescribed in the "British Pharmacopœia" as oil of eucalyptus, and he imposed a fine of 10s. and £1 1s. costs.

THE PURITY OF GINGER.

PUBLIC ANALYSTS CRITICISED AT BARNSELY.

AN interesting point under the Food and Drugs Act was raised at Barnsley on January 23rd in a case in which Ernest Broadhead, shopkeeper, Thurlstone, was charged with selling adulterated ginger. The sample had been obtained by Inspector Bundy, and divided in the usual way, and Mr. A. H. Allen, public analyst, had certified that it contained 50 per cent. pure ginger, and 50 per cent. of ginger which had been exhausted of its pungent principle. The defendant applied at the opening that the third sample should be sent to Somerset House for analysis. The operation of the Act, he said, had practically skimmed the country of expert witnesses of importance, and if he wanted a witness to examine his sample to say whether

the public analyst for the prosecution was correct or not, he had to go to the public analyst for some other place. But these public analysts had formed themselves into what was practically a trade union, called the Society of Public Analysts, and apparently it had grown to be their custom that when a public analyst was engaged for the prosecution, as he must be in every case, they would not give evidence against him. This was what he had experienced in this case, and he showed how he had communicated with Mr. C. Williams and Mr. Campbell Brown, public analysts for Lancashire, setting forth the facts of the case and asking for an analysis of his part of the sample, and that they had refused to make the analysis or have anything to do with the matter, Mr. Brown remarking in one of his letters, "You may accept Mr. Allen's certificate as approximately correct." This ginger had been supplied by Peake and Co., Limited, one of the leading spice houses of London; it was guaranteed genuine. A sample of the firm's ginger had been taken in the Manchester Division and sent to Somerset House, whose certificate, in opposite to that of the public analyst, was that it was pure ginger. He asked, in the circumstances, that the sample should be submitted to Somerset House. This was opposed, and it was submitted that the ordinary procedure under the Act should be followed. The Bench held that, whatever evidence might be adduced before them, cause for submitting the sample to the test of the Somerset House analysts had been shown, and the hearing was adjourned a month, that it might be so submitted.

ADULTERATION AT KENSINGTON.

THE public analyst (Mr. Chas. E. Cassal, F.I.C.) states that during the quarter ending December 31st 134 samples came under his notice, consisting of 40 samples of milk, 16 of butter, 10 each of bread, coffee, flour, mustard, oatmeal, and whisky, and six each of wheaten flour and black pepper. Of this only 16 were found to be adulterated, namely, 7 of milk, 5 of butter, 1 each of flour and custard, and 2 of whisky.

POISONED GARMENTS.

THE contractors write: "We trust it may not be long before it is made a penal offence for a manufacturer to introduce any poisonous chemical into any wearing fabric without notification. In the Birmingham case, to which you refer, we never had heard of such practice till it was revealed to us by the analyst to the Birmingham Corporation. We had kept the material in stock for many years, and supplied many similar contracts to colliery and other companies. Had the coats been exposed to ordinary weather for the first few days of wear the atmosphere would have removed the injurious acid, but the day when the garments were put on for the first time immediately after their delivery was a day of days—snow, sleet, then heavy rain—the garments were saturated, the moisture penetrating to the skin. Had we had the slightest suspicion of anything of the kind the material would first have been sent to our cloth workers, as in the case of our better class woollens. We have done this with the remaining piece, with most satisfactory results.

"Our cutters and workers, in the making up, experienced no ill effects from handling the material, nor have we ever heard of anyone having suspicions of any deleterious composition in these kerseys. If merchants are to be prepared to know all the compounds of dyes introduced into cloths, and are to keep pace with the advances in chemistry, we must establish laboratories and engage assistants who have been trained in that science. We send you a pattern of the kersey before washing and after, also the manufacturer's letter, which you will treat as a private communication. They have been down to see us, and state they only wish pure goods were demanded. The whole of the garments are being washed to remove every particle of the acid complained of. As merchants in an extensive way of business we shall be ready at all times to help you in exposing and ending the system of adulteration in fabrics without proper

notification. We should also like to see it made an offence for merchants or traders to wilfully give false description of materials, certainly false origins of manufacture."

THE SANITATION OF NICE.

VARIOUS papers have mentioned the existence of fever at Nice, and, unfortunately, English officials resident in that town, having an interest in the letting of villas, banks, etc., do their utmost to gloss over the undoubted fact that there has been, and still is, a great deal of sickness in the town. Everything is done for the attraction of foreigners outwardly, and in a few of the large hotels frequented by the possessors of very long purses the sanitation is carefully attended to; but at the hotels and pensions frequented by the vast majority of our countrymen, all the gilt and palm-trees cannot hide the awful smells. When the attention of the proprietors and servants is drawn to the fact one is flatly contradicted or abused.

I hope, writes T. Thornton, late Captain R.N., from St. George's Club, Hanover Square, W., many others will follow the example of several of my friends and myself, and return to the duller but more healthy Southern English watering-places. We only decided to return when a third of our number had fallen ill, and with difficulty got away from that moral and physical sink of Europe.

BUTCHERS AND THE PREVENTION OF CONSUMPTION.

WARRANTIES OF SOUNDNESS TO BE DEMANDED.

THE members of the Edinburgh Master Butchers' Association have decided that from and after the New Year they will purchase fat stock only under a warranty of soundness as regards tuberculosis. The following circular has lately been issued to the members of the association, and as the members with one accord signed the pledge referred to, the resolution stated on the circular will take effect as from January 1st, 1899:

"For many years our trade has suffered severe losses from the fat cattle they bought at markets as sound being condemned, when slaughtered, on account of tuberculosis. Repeated efforts have been made to obtain from Government redress for this state of matters, but without success.

"The report of the recent Royal Commission on tuberculosis bears out that tuberculosis is not only a preventable disease, but by the use of tuberculin it can be entirely eradicated from a herd of cattle. Given care in the selection of healthy stock and attention to ordinary sanitary requirements, it is a comparatively simple matter for the farmer to keep his cattle free from disease.

"The Board of Agriculture has offered to supply tuberculin free of charge for the purpose of testing cattle, but the Royal Society of Agriculture in England and the Chamber of Agriculture in Scotland have not as yet seen their way to accept and make use of this offer; probably because butchers have hitherto purchased fat cattle indiscriminately and without requesting any guarantee as to freedom from disease.

"At a meeting of the trade held on 21st November, it was resolved to recommend members in future to confine their purchase of fat bullocks and heifers to such as were guaranteed free from disease and fit to pass the inspectors acting on behalf of the Edinburgh public health authorities.

"As it is very desirable that the trade should be unanimous on this question, you are requested to fill up the enclosed postcard and return it to the secretary."

POISONOUS GERMAN TOYS.

It is proposed that Dr. Salmon's report on the German toy trade should be published in England as well as America, in order to stimulate British manufacturers. The American publication strongly warns purchasers against all kinds of German toys, and in view of the imminence of the Christmas trade dealers fear it will do a good deal of harm. Dr. Salmon says that the paint used in nearly all cases contains a highly poisonous substance, and the toys are therefore

very dangerous for children. Importers in London do not believe that the publication of the report in England will serve any useful purpose, or that it will tend to decrease the German trade. British toy manufacturers are too few in number, and do not show the ingenuity and inventiveness of their Dutch and German competitors.

VINEGAR SWINDLES.

At the meeting of the Health Committee of Carlisle Town Council, the inspector reported that he had taken three samples of vinegar. The city analyst had certified that one sample had been fortified with distilled vinegar, another was adulterated with 50 per cent. of dilute acetic acid, and the other consisted entirely of dilute acetic acid. The vendors could not be prosecuted, as the samples were taken informally, because he did not wish to worry tradesmen.

GOLDEN SYRUP ADULTERATION.

MR. ALEX. FOWLER writes from Fowler's, Ltd., Black-wall, London, E.:

"We will be glad if you will allow us to say that we have been cane sugar refiners and manufacturers of golden syrup for many years, and have never worked beet sugar.

"Besides this, the writer's practical knowledge of the manufacture of golden syrup in a sugar refinery extends back to thirty-five years ago, and as the result of all that experience we can confidently assert that no golden syrup has ever been made that did not contain glucose. If a syrup were made by using nothing but cane or beet sugar and water, it would not be golden syrup, and it would go solid in a few hours. To make a syrup that will remain a syrup, and bright, such as the public demand, glucose must be present in it. Of course the amount of glucose required is a matter of experience, and varies according to the strength of the raw sugar used.

"There are three methods by which the glucose may be introduced into the golden syrup:

"1. By mixing commercial glucose with the cane sugar, from which no crystals have been abstracted.

"2. By chemically treating the cane sugar with vitriol and lime, and thus producing 'invert' sugar (which is a mixture of glucose and fructose in equal proportions).

"3. By greatly impoverishing the sugar, *i.e.*, by taking two or three crops of crystals out of the sugar liquor, and then using the residue to make the golden syrup from. Even in this case glucose is present.

"We prefer the first of the above processes, as, being free from chemicals, it produces the sweetest and most wholesome syrup, and none of the crystals of the raw cane sugar have been abstracted. In no case, however, should more glucose be present than is necessary to prevent granulation."

FOOD ANALYSES IN LEEDS.

MR. THOMAS FAIRLEY, City Analyst, reports that during the quarter ending December 31st, he received for analysis 103 samples of milk, 2 of condensed milk, 17 of butter, and 2 of tinned peas; a total of 124. Two of the samples of milk were adulterated with 11 and 7½ per cent. of water respectively, as compared with the lowest quality of genuine milk, and 32 were of low quality, the total solids varying from 10.9 per cent. to 11.9 per cent., whereas average milk contains 12½ per cent. Of the butters two were supplied in wrappers marked margarine, although butter was asked for. Five others contained from about 79 to 66 per cent. of foreign fat. None of the samples contained any boracic acid preservative. Both samples of condensed milk contained boracic acid in small quantity. The samples of peas contained copper compounds corresponding to half a grain of copper per pound. Whatever difference of opinion there may be with regard to the poisonous qualities of copper in articles of food, the consumer ought to know what he is using, and such articles as peas ought to be distinctly labelled as containing copper. The other samples were reported as genuine.

BURNLEY AND THE MILK SUPPLY.

IN accordance with notice Mr. Nutter, at a meeting of the Burnley Town Council, moved that in the opinion of this Council it is essential in the interests of the public health that Her Majesty's Government should forthwith promote legislation for the protection of the milk supply in accordance with the recommendations of the Royal Commission on tuberculosis. The discussion on the motion was left over to a future meeting.

CHEMICAL TREATMENT OF AMERICAN MEAT.

THE big packing firms in the States are much incensed at General Miles's charge that the meat furnished to the United States Army during the late campaign was chemically treated, and that many of its good properties were thus destroyed. They fear that this will have a most prejudicial effect upon their business abroad, and they have formulated a demand for a formal impartial investigation into the charges made by General Miles.

DATING TINNED FISH.

A CORRESPONDENT writes: "I should like to point out one or two obstacles in the way of dating the tin when packed, first of which is that nearly the whole of the tinned fish is labelled in this country, and not where packed. The dealers always sample a pack, and buy it on its merits, quality always being considered. I think a great many people, especially the poorer class, having bought an article, consider that it must be eaten, even if they add plenty of vinegar and pepper to destroy the flavour of the article, saying, 'Well, we've bought it, and we are not going to throw it away,' instead of returning it to the grocer, who will always change it. Tinned goods are a boon to the public, but surely there is no need for anyone to eat bad tinned goods."

TUNBRIDGE WELLS TOWN COUNCIL AND ADULTERATION ACT CASES.

THE Tunbridge Wells Town Council, on January 4th, commented adversely on the recent action of the borough magistrates in regard to the dismissal of a case where a local tradesman had been summoned for an alleged breach of the Food and Drugs Act. At the Bench the report of an expert chemical analyst was produced to the effect that 10 per cent. of water had been found in milk sold to the public for drinking purposes. The justices gave the defendant, a dairyman of good position, the benefit of a doubt. The Health Committee strongly resented the decision, and advised the Corporation to appeal to a higher Court. After a warm discussion the Council determined to support the committee.

ARTIFICIAL TEA.

MESSRS. J. DELAITE AND H. LONAY have recently reported in the *Bulletin Assoc. Belge des Chim.*, 11 (1), pages 13-21, upon a sample which was submitted to them. After examination it was found to contain 68 per cent. of extraneous leaves rolled into a globular shape. On steeping in water these unrolled less readily than the true tea. A bluish-gray powder separated from the leaves under water, and was found to contain manganese in addition to ordinary ash constituents, but no copper or lead. The microscopic examination of the powder led to the conclusion that earth and indigo had been used to imitate the colour of pure tea. In general form the extraneous leaves resembled *Thea chinensis*, but differed therefrom in microscopic character, as also from *Epilobium* *Vaccinium arctostaphylos* and other known vegetable adulterants, and, in fact, could not be botanically identified. The authors, however, consider that it is sufficient in practice for the chemist to detect the presence of extraneous adulterant leaves in tea, without specifying their nature.

THE CONDITION OF COWS UNDER TUBERCULIN TEST.

AT a meeting of Dumfermline Burgh Commission on January 9th Provost Scobie presiding—the Chief Sanitary Inspector reported that five samples of milk had recently been sent to the Burgh Analyst for analysis. Of the five three had been found to be up to and below the required standard. In one of the two cases it appeared that the cows had been subjected to tuberculin test, and in regard to it Mr. Iverson Macadam wrote in reply to the Sanitary Inspector as follows:—“(1) The question as to condition of cows under the process of tuberculin testing is one rather for a veterinary surgeon than a chemist. I am, however, of opinion that until a proper period has elapsed after the test has been applied the animal will not be in a satisfactory and healthy condition, and that therefore the milk should not be sold to the public. In this opinion I am borne out by Professor W. O. Williams, with whom I have communicated. (2) I am of opinion that the milk might suffer loss equal to that shown in analysis owing to the condition of the cows.” In view of the statement by Dr. Macadam it was agreed not to raise a prosecution in the case where the cows had been undergoing the test.

THE FOOD AND DRUGS ACT IN DUBLIN.

THE following statement has been prepared by Sir Charles Cameron, at the request of the Corporation, showing the number of articles taken up by inspectors of food, and the quantities of diseased and unsound food detected in the first two quarters of 1897 and of 1898 respectively. First quarter, 1897—Butter, 100; milk, 126; buttermilk, 18; total, 244. Of the above articles, 25 were adulterated. Thirteen of the samples were taken up by the inspectors appointed by the Corporation, but who are officers of the Poor Law Unions. Unsound and diseased food detected and condemned, 26,893 lbs.

“Second quarter, 1897—Butter, 17; milk, 237; buttermilk, 28; sugar, 1; total, 283. Of the above, 17 were adulterated. Thirty-three specimens of milk were taken up by inspectors appointed by the Corporation, but acting only for the Unions. Unsound and diseased food detected and condemned 40,640 lbs.

“First quarter, 1898—Butter, 94; milk, 130; buttermilk, 7; coffee, 7; whisky, 2; total, 240. Of the above, 13 were adulterated. Thirty-seven of the samples came from the Union inspectors. Amount of diseased and otherwise unsound food detected and condemned 22,692 lbs.

“Second quarter, 1898—Butter 28, milk 54, buttermilk 2, coffee 28, whisky 8, drugs 29; total, 149. Of the above, 16 were adulterated. Of the samples 40 were taken up by the inspectors attached to the Union. Amount of unsound food detected and condemned, 20,715 lbs. I may here state that the comparatively small number of samples taken up in the second quarter of 1898 was mostly due to the extensive alterations which in that quarter were carried out in the Sanitary Office and Laboratory, and which greatly interfered with the analytical work. My time, too, was largely occupied in preparation for the great Sanitary Congress which was held in August last. I may here state that in the third quarter of the year 1898 294 articles were collected by the inspectors, and 7 by the Union inspectors; and of those 294 articles 42 were adulterated. As wholly unwarranted charges have been made to the effect that Dublin is far behind other cities in enforcing the provisions of the Sale of Food and Drugs and Margarine Acts, I beg here to give those statements the flattest contradiction. It is a fact that for more than thirty years past Dublin has taken the lead, regard being had to population, of all the towns in the United Kingdom. A return follows which shows that the convictions in Dublin from 1893 to 1897 were 212 per 100,000 population, while in twenty-eight large English cities they were only 45 per 100,000 for the same period.”

The attacks upon Sir Chas. Cameron, we fear, have their origin less in any real wish to benefit Dublin than in envy and a wish to step into his shoes.

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Food and Sanitation.

SATURDAY, FEBRUARY 4TH, 1899.

SPECIAL NOTICE.

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THE GROCERS' PROPOSALS TO PARLIAMENT *RE* A NEW ADULTERATION ACT.

IN any new legislation respecting adulteration the opinions of grocers as a body must needs be carefully considered. The Parliamentary Committee of the Grocers' Federation have therefore done well to issue so timely their views in the following manifesto:

"For the past seven years this Federation has persistently urged upon the Government of the day the necessity for a speedy amendment of the Sale of Food and Drugs

Acts (1875 and 1879). The lines upon which the Federation has recommended that such amendments should proceed have been in the direction of—to quote the words of the Select Committee's report of 1896—'avoiding the appearance of harassing traders by what may be regarded as attempts to manufacture cases of violation of the law.' With this in view they co-operated with Sir Charles Cameron, M.P., in 1892 and 1893 in the introduction of a Bill to amend the Acts in these directions. As a result of the introduction of that Bill a Select Committee was appointed in 1894, which sat during the three sessions of 1894, 1895, and 1896, on which committee the Federation was very ably represented by Mr. F. C. Frye, M.P., and during the sittings evidence on behalf of the Federation was given by Sir William Pink, J.P., K.L.H., Messrs. A. M. Dunlop, J. Williams, W. Jennings, F. W. Beck, and A. J. Giles. Almost every suggestion offered by these witnesses is included in the recommendations of the Select Committee in their report of 1896, thus establishing the reasonableness of the claims put forward by this Federation for an amendment of the existing law. Various deputations from the Federation have waited upon Mr. Ritchie, Sir Walter Foster, Mr. Shaw-Lefevre, and Mr. H. Chaplin during their presidency and Parliamentary secretaryship respectively at the Local Government Board. On each occasion the deputation has been assured of the sympathy of these successive Government Ministers. These assurances, coupled with the Select Committee's recommendations, in the opinion of this committee, constitute a very strong claim upon the Government to bring in amending legislation without further delay. In 1897 a Bill to amend the Acts was introduced at the close of the session by Mr. Chaplin, but was withdrawn immediately. In 1898 a promise was given in the Queen's Speech that the matter should be dealt with if time permitted, and in July of that year a Bill was introduced by the President of the Local Government Board, but its scope was narrowed to dealing with agricultural and horticultural products. The Bill, therefore, fell far short of the demands made on behalf of this Federation, as it embodied very few of the recommendations of the Select Committee, whilst it proposed to deal with many matters of special interest to the agricultural classes without any relief being afforded to retail dealers, upon whom these Acts have hitherto borne more harshly than upon any other section of the community. In addition, this Bill proposed to set up a new authority for the administration of the proposed Act—the Board of Agriculture.

"The announcement recently made that a Bill on Agriculture would be introduced into Parliament during the coming session by the President of the Board of Agriculture may be taken as an intimation that the Government intends to proceed somewhat on the lines of the 1898 Bill in the next session. To that course of procedure this committee takes serious exception, as in its opinion it will tend to worse confusion than at present exists if the adulteration of agriculture and 'horticultural' products is to be dealt with by one Government department, and the adulteration of other foods by another Government department. It may also here be pointed out that the transference of the administration of any part of the adulteration laws from the Local Government Board to the Board of Agriculture will involve the loss of that practical experience which the officials of the former department have acquired, and the consequent ability which they have displayed in administering the Acts, which have produced such satisfactory results that the Select Committee say they 'have ground for stating that, where the Acts have been well administered, they have been most beneficial in diminishing adulteration offences.' This is shown in the fact that whilst the number of samples taken has risen in twenty-five years no less than 153 per cent., the percentage of adulteration has fallen from 16.2 to 12.9. Doubtless, if further powers were given to the Local Government Board, these results would be still further improved upon. If, on the contrary, the power to deal with the adulteration of agricultural and horticultural pro-

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ducts is transferred to the Board of Agriculture, the officials of that department will take many years to acquire the necessary experience for carrying out the new law, unnecessary friction will be caused between traders and the new authority, and effectual dealing with adulteration will be greatly impeded. This committee desire to point out further that the proposals of the Government to take up the agricultural side of this question, ignoring the claims of the traders to consideration, is contrary to the recommendations of the Select Committee, is a failure on the part of the Government to carry out the promises given by their own Ministers to deputations from this Federation that the claims of the traders should be dealt with, and does an injustice to over 150,000 shopkeepers, whose claims are certainly very strong, to have their grievances remedied after the assurances given them by successive Ministers of the Local Government Board during the past seven years. In that period the following statements have been made by these Ministers to deputations from the Federation: Mr. Ritchie, in 1892, said: 'If I find myself able to remove any of the difficulties which are established, I shall be very glad to do so.' Sir Walter Foster, in 1892, said: 'He fully recognised the difficulties under which they laboured, and they had that day placed before him instances of some very remarkable difficulties. He was very much in sympathy with them in the matter, and could assure the deputation that the Government would give them the most serious and earnest consideration.' Mr. Shaw-Lefevre, in 1894, said: 'A case had been made out for inquiry.' Mr. Chaplin said, in 1898, he was 'perfectly sensible of the great importance of the question, and the great interest that is taken in it,' and added: 'Everything you have said to me will be considered by myself and my colleagues with all the attention it deserves.'

"In again setting forth the various points on which this Federation urge there should be amending legislation they wish to state that they have not the slightest objection to the principle of a law or laws to prevent adulteration; on the contrary, they wish to so strengthen the law as to make it more equitable and practicable by the honest trader, and more effective in reaching the dishonest. The special amendments of the Sale of Food and Drugs Acts which they are desirous of securing are as follows:

"(1) To provide that an invoice be a sufficient warranty, as recommended by No. 4 of the Select Committee's recommendations. As the law stands at present a warranty must be an express written warranty, intended to be given as such. This operates harshly, and the retail trade hold that if they receive articles from dealers they ought to be entitled to assume they are what they purport to be as described on invoices. This principle has been adopted in the Margarine Act, and ought, we consider, to apply to all other articles as well as butter. (2) To provide that where the sale of an adulterated article has been made by the fault or error of an assistant, there shall be power to bring him before the court as the actual offender, the em-

ployer in such cases to be exempt on proof that the sale was made without his knowledge or connivance. This principle is contained in the Margarine Act, and is contained in recommendation No. 12 of the Select Committee. (3) To amend Section 22 of the Act of 1875 by making it compulsory on the justices or the court, at the request of either party, to refer articles for analysis to the Somerset House authorities, which course is at present discretionary. This is No. 13 of the Select Committee's recommendations. (4) To provide for the amendment of Section 10 of the Act of 1879 so that a proper limit shall be made as to the time when summonses shall be issued for all articles, besides merely perishable goods, as now provided. This proposal has been adopted by the Select Committee in its report, on page 13. Also to provide that the summons shall be made returnable in fourteen days instead of seven days as at present provided. (5) To provide that the use of the word 'margarine' be a sufficient protection against conviction for the sale of butter mixtures, or to provide that all prosecutions for the sale of such mixtures be taken under the Margarine Act, and not under the Sale of Food and Drugs Act. (6) To provide that a copy of the analyst's certificate shall accompany the summons as set forth in the Government Bill of 1897. (7) To provide for proceedings being taken against a person or firm giving a warranty where any such warranty is pleaded in defence to proceedings. If this were done, a person summoned for alleged adulteration, and intending to rely upon an invoice as a defence, would be able at the time the summons was made returnable to bring the dealer, manufacturer, or packer before the court, and the whole matter could then be dealt with; and when the person summoned had proved that he sold the article in the same condition as received, the question would be between the inspector and the dealer. (8) To provide such an improved system of inspection as will cause the law to be more efficiently and systematically administered in all districts. No. 1 of the recommendations of the Select Committee suggests a course that may be adopted for this purpose. (9) That in connection with the sale of mixed articles the vendor should supply the purchaser with a label setting forth that the article is mixed. This is No. 2 of the recommendations of the Select Committee of 1896. (10) As to the suggestion contained in No. 19 of the Select Committee's recommendations for the establishment of a Court of Reference, it is felt that it would be in every way more satisfactory to enlarge the powers of Somerset House so as to constitute that institution as a scientific Court of Appeal rather than set up an entirely new authority. (11) That No. 10 of the recommendations of the Select Committee, 'that the division of the sample after purchase and delivery of a portion to the vendor should be compulsory,' be adopted. (12) That retailers should be empowered to refuse to sell a manufactured article otherwise than in the original unopened labelled tin or packet, which the Select Committee state 'appears to be reasonable,' and which is dealt with as above in recommendation No 7. (13) That the certificate of any public analyst put forward by a defendant should be *prima facie* evidence without the appearance of the said public analyst, just as the certificate of the public analyst put in by the prosecution is accepted by the court under Section 21 of the 1875 Sale of Food and Drugs Act. At present the defendant is put to unnecessary expense in having to bring into court the public analyst who gives a certificate on his behalf in case of a dispute as to the analysis of the prosecution. (14) That provision should be made for the examination of candidates for the post of public analyst, in order that only thoroughly competent persons should fill such important appointments.

"The Federation are opposed to an interference with the colouring of margarine, and to the prohibition of the mixing of margarine and butter, on the ground that neither course would necessarily prevent fraud, whilst the prohibition of mixtures would increase the price of butter and seriously affect the trade in margarine, thus depriving the poorer classes of an article which is wholesome and nutritious. A thorough enforcement of the present law is all that is necessary for this purpose. The Federation is

also opposed to the proposal in the Select Committee's recommendation No. 16 to make imprisonment any part of the penalty, unless the article which is sold is injurious to health, and that is already provided for in Section 3 of the Act of 1875. They concur, however, in the proposal for an increase of fine where repeated offences have been committed by a person wilfully and knowingly. The Federation are also opposed to the publication of the conviction either by placard or advertisement as suggested in recommendation No. 17."

WATER AT SPIRIT PRICE.

F. RICHARDSON, 60, Isledon Road, Holloway, was summoned by the Islington Vestry, on January 25th, for having sold, on December 7th, whisky, the strength of which was 26.5 degrees under proof.

Mr. Bramall prosecuted, and Mr. A. J. Ford defended.

Mr. Bramall said, that although the sample was only 1.5 under the minimum allowed, the sanitary authority recommended prosecution.

A sample of whisky was purchased by a sanitary officer at the defendant's house, the "Russell Arms." After Mr. Richardson had been informed that the sample was purchased for the purpose of analysis, he called the officer's attention to a notice in the bar intimating that all spirits sold were diluted.

Mr. Ford, in defence, relied upon the notice, and called the Magistrate's attention to the fact that the defendant had been in the house twenty-seven years, and had never had a conviction recorded against him. Since the sample had been taken, Mr. Richardson had had other notices fixed in the house.

Mr. Horace Smith said he regarded the matter as a small one, and directed the summons to be withdrawn on the payment of £1 is. costs.

HENRY GOULSTON, licensed victualler, of the "Lord Palmerston" Hotel, Market Square, was summoned for selling adulterated whisky on December 8th.—Mr. W. B. Shoosmith prosecuted on behalf of the Corporation of Northampton, and Mr. C. C. Becke defended.—Inspector White, Sanitary Inspector to the Corporation, said on the date named he purchased at defendant's house a pint of whisky, which he submitted for analysis, a copy of which he put in.—By Mr. Becke: He did not see a notice in the bar to the effect that all spirits offered for sale at that establishment were diluted, and no alcoholic strength was guaranteed. He did not look round the walls for the notice.—Mr. Becke: You looked on the ground all the time, did you?—Witness: No; I looked at the barmaid. (Much laughter.)—Mr. Becke submitted that there was no offence, inasmuch as the required notice was hanging in a prominent position in the bar.—Defendant, sworn, bore out this statement.—The case was withdrawn on the application of the prosecutors.

Arthur Mead, licensed victualler, "Bull's Head" Hotel, Sheep Street, was summoned for a similar offence.—This case was not proceeded with.—Mr. Goulston and Mr. Mead each gave a sovereign to the Poor Box.

As these notices are palpable evasions of the Act, the local authorities concerned should oppose the renewals of the licenses unless the "notice dodge" be abandoned.

At Worcester, on January 27th, James Hope, publican, "Four Ways" Inn, Blockhouse, was summoned by the Worcester sanitary inspector (Mr. W. Pacy), under the Food and Drugs Act, for selling adulterated brandy. Mr. S. Southall (Town Clerk) prosecuted, and Mr. W. W. A. Tree defended. Mr. Southall stated that on December 17th Mr. James Sheppard went to the "Four Ways" Inn and bought two shillings worth of brandy. The brandy was sent to the analyst, who found it to be 39 degrees below proof, whereas the Act only allowed 25 degrees below proof. At the time of the sale defendant was about to leave his house to take another in the Moors. Mr. Tree argued that defendant was not responsible. The brandy was sold by the employé named Tarrant, who was responsible. Defendant did not suggest that Tarrant had adulterated it.

The Bench inflicted a fine of £3, and costs £2 3s. 6d. The Mayor hoped the case would be a warning.

At Sheffield, on January 27th, Charles Marsh, landlord of the "Traveller's" Inn, Wadsley Bridge, was charged with selling adulterated whisky.—Mr. Joseph Wilson said he was inspector under the Food and Drugs Act for the West Riding County Council. On December 20th he bought a gill of whisky from the defendant, which had since been analysed and found to contain 27.9 parts of water, which was 3.8 parts above the amount allowed.—Defendant said that the whisky had been mixed by his daughter when he was suffering from rheumatics; she may have added a little too much water to it. He thought that the whisky had lost its good condition through standing in the keg.—A fine of £1, including costs, was imposed.

BEFORE Sheriff Armour, at Cupar, on January 26th, George Forrest, publican, was charged with having sold, on December 15th, two gills of whisky to Alexander Duthie, Inspector under the Food and Drugs Act, adulterated by an admixture of water to 8.10ths degree more than 25 degrees under proof. He pleaded guilty. Mr. T. W. Davidson, solicitor, who appeared for the accused, stated that he was mixing his New Year's whisky, and that water and whisky would not amalgamate properly in a short time without "an agitator," which Forrest did not have. If the inspector had come a day later he believed the whisky would have been all right. He pointed to the small extent to which it was adulterated, and maintained that it was a technical offence. Mr. Renton, Fiscal, stated the expenses were a guinea, and he did not press for a penalty more than that sum. The Sheriff thought he might safely take a lenient view of the case, and fined the accused £1 is.

THE NOTICE DEFENCE FOR SPIRIT ADULTERATION.

At Kingston, on January 27th, James Young, "Union" Hotel, Surbiton Park Terrace, was summoned for selling whisky which was diluted with $5\frac{1}{2}$ per cent. of water over the lawful amount.—James Gibbon said that on Friday, December 30th, he went to the "Union" Hotel and asked for some whisky, for which he paid 1s. 4d. He handed it to Mr. Houghton.—By Mr. T. F. Charlton, who defended: Witness gave Mr. Houghton the sample inside the house. He did not inform Mr. Young that the sample was wanted for analysis. It was not his duty to do so. Witness had purchased a number of samples of whisky for Mr. Houghton. The defendant did say he had a notice, and Mr. Houghton replied that he could not read it from the bar.—Mr. R. A. Houghton said that the notices as to the dilution of spirits were in such positions as to be illegible from the big public bar in the middle of the house. In reply to Mr. Charlton, witness said that if such a notice as that produced had been placed in the bar those proceedings would not have been taken. He would suggest that some members of the Bench should visit the premises if there was any dispute as to the distance the notice was placed from customers.—For the defence, Mr. Young, the landlord, said the man was served the whisky and gin which he asked for. The man left the house and went outside for three or four minutes, after which they both returned. Witness had meanwhile served two or three customers. There were two notices that the spirits were diluted in the bar where the inspector and his assistant entered. The notice was about 5ft. 7in. from the purchaser.—Mr. Houghton: Nearer 12 feet from where I stood.—Mr. Charlton wished to be sworn himself, but refrained on the advice of Mr. Wilkinson.—Mr. James Young, jun., also gave evidence.—The Bench decided that the defendant had not been sufficiently careful about the notices. He would be fined 40s. and costs—£3 10s. in all.—Mr. Nuthall said the notices should be printed on white paper, and not on green or grey.

IMPORTANT FARMER'S BUTTER CASE.

At Wirksworth Petty Sessions, on Tuesday, January 24th, Captain Henry Stair-Sandys, Inspector under the

County Council Food and Drugs Department, charged Percy Gamble, the Dale, Wirksworth, grocer, with selling to complainant one half-pound of butter which was not of the nature, substance, and quality demanded, in that it contained at least 40 per cent. of fat other than that of butter; this was sold to the officer on the 15th of November, 1898.

As the server of the butter to Mr. Gamble had been summoned, the prosecution withdrew the charge against Mr. Gamble on payment of costs.

Thomas Hand, Parwich, farmer, was summoned by Captain Stair-Sandys, Inspector under the Food and Drugs Act, that by the agency of James Twigg he did sell to the complainant one half-pound of butter which was not of the nature, substance, and quality demanded, in that it contained at least 40 per cent. of fat other than that of butter, that was sold to the complainant on the 13th December, 1898.

Mr. Clifford, of Derby, appeared for the prosecution, and at the outset he said it was a serious case, and the outcome of the case which was brought before the court last Sessions against Mr. Percy Gamble, who was then charged with selling adulterated butter on the 15th of November last year. Since that time, however, Mr. Gamble had given every possible assistance to Captain Sandys, and they had thus been able to bring before the court the producer of the alleged adulterated butter. Mr. Gamble went with Captain Sandys on the 13th of December and met a Mr. Twigg, a carrier from Parwich, from whom the butter had been purchased. A sample was bought from Twigg of the same pattern as the butter which had been supplied through Mr. Twigg to Gamble, and of which Captain Sandys had purchased half a pound on the 15th of November. This had been analysed, and had been found to contain 40 per cent. of adulterated fat, other than that which was consistent with butter; and also for the purpose of making this production keep boric acid had been added. Mr. White, the county analyst, would tell them that margarine had been worked in the butter. Mr. Hand, the farmer, whom they had before them for this case, was not a very large farmer, but he should ask them to inflict a substantial penalty if the case was proved to their satisfaction, to prevent any further occurrence to the detriment of the public at large. This butter was sold in pats, round shaped, as is usual with the sale of fresh farmers' butter.

Captain Sandys, Inspector of Foods and Drugs, was then called, and he said, in consequence of the purchase he made on November 15th, he attended at Wirksworth on December 13th, and Mr. Gamble, the man who had sold him the butter on November 15th, pointed out to him the carrier Twigg, from whom Mr. Gamble had obtained the butter. Mr. Twigg was then coming into the market in the ordinary course of his duties, and he (the Inspector) told Twigg what he required. Mr. Twigg had three kinds of farmers' butter in his cart; one of these was marked with the imprint of a sheaf, the same as the butter he had purchased from Mr. Gamble in November. He took also samples of the other butter in Mr. Twigg's possession, but found that the other two were quite correct. For the sample purchased he gave the market price of 7d. per half-pound. The butter bearing the imprint of the sheaf had been sent to be sold in the market by Mr. Hand, who was a farmer at Parwich. The samples were divided into three portions, one given to Twigg, the second sent by his assistant to the county analyst, Mr. White, and the third portion he produced. The analyst's certificate certified that the portion he received weighed two and a half ounces, 40 per cent. of which was foreign to butter. Captain Sandys stated that Hand sent three pounds of butter to market marked with a sheaf, and the other two samples were marked with a swan and a thistle respectively.

James Twigg, carrier, of Parwich, was called, and he said on December 13th he came to Wirksworth, as was his usual custom on the market day. He had received the butters, of which Captain Sandys took samples, for sale in the market, and the one with the sheaf imprint was that which he obtained from Hand, a farmer at Parwich. He

also corroborated as to the portion he received from Captain Sandys, and also that sevenpence was paid him per half-pound.

Samuel Slack, assistant to Captain Sandys, residing at Spondon, said on December 14th he received from Captain Sandys samples of butter, which he took to Mr. White for analysis.

Mr. John White, F.I.C., the county analyst, gave evidence as to the receipt of the samples, and confirmed the certificate which had been put in. The 40 per cent. of foreign fat contained cotton seed oil, a common constituent of margarine, and boric acid had been added to make the article keep. This was not as a rule found in farmers' butter, and he had come to the conclusion that the butter had been adulterated with margarine, which could be purchased at 4d. per lb.

The defendant said his wife's niece made up the butter, and he had nothing to do with it; therefore he knew nothing at all about it.

In reply to a question from the Bench, Mr. White stated that there was nothing in the butter that was injurious to health, though opinions differed as to whether boric acid was so or not.

The Bench fined Hand £2 10s. and costs (£2 11s.), which was paid.

MARGARINE.

At Hertford, Henry Reed, Castle Street, was summoned by Inspector Johnson, under the Food Adulteration Act, for selling, to the prejudice of the purchaser, half a pound of butter which was not of the nature, substance, and quality demanded by the purchaser, such article of food being found on analysis by the public analyst (Mr. A. E. Ekins) to be adulterated with 67 per cent. of margarine, on December 17th, 1898.

Mr. Avory, solicitor, Tottenham, represented defendant, and on his behalf entered a plea of not guilty.

Albert Victor Littlefold, a lad, stated that on December 17th, about 7 p.m., he went to Mr. Reed's shop and asked for half-a-pound of shilling butter and a pound of the best coffee. Mr. Johnson was about to take charge of the butter package when Mrs. Reed came and took it from witness's hand, saying that it was not butter but margarine. Previously to this he expected that it was butter with which he had been served.

Cross-examined, the lad said he had been a witness in such cases for Mr. Johnson. His mother had for a long time been a customer at Mr. Reed's. He did not see a large printed ticket "Margarine" (produced by Mr. Avory) on the article from which he was supplied. Had he noticed it he should have said so. When he had gone to Mr. Reed's for butter for his mother he had never seen that ticket attached to the bulk from which he was served. He was really telling the truth in saying this. Mrs. Reed asked him if the butter was for his mother. She did so three times, and each time he said that it was. Although he told Mrs. Reed that untruth, what he now said was the truth.

Re-examined by Mr. Johnson: He had frequently had portions of samples to take home to his mother.

Inspector Johnson deposed that when the last witness came out of the shop with the butter and coffee he immediately returned into the shop and saw Mr. and Mrs. Reed. He (Mr. Johnson) informed Mr. Reed that he had bought the butter for the purpose of having it analysed by the public analyst, and was proceeding to divide it into three portions, Mr. Reed making no objection, when Mrs. Reed came up and tried to take the butter from him. She said it was not butter but margarine that the boy had been served with, and the boy, on being appealed to, said he had asked Mrs. Reed for half-a-pound of shilling butter. Witness produced and handed to the bench the certificate of the analyst.

Cross-examined: The boy was paid by the County Council. He received on this occasion 2s. 6d., but not exclusively for the evening's work. Witness had not previously "sampled" any of Mr. Reed's stuff.

Mr. Ivory: Don't call it "stuff," but say "articles." (Laughter.)

Mr. Johnson: As you like.

Mr. Ivory, in defence, said that Mr. Reed had carried on business for twenty-six years in Hertford, and this was the first occasion on which he had had to appear in this Court on a charge of adulteration. In this case the circumstances pointed to an evident mistake. The witness Mr. Johnson had called to establish his case showed that he was not at all particular as to whether he told the truth or not, for three times over he told Mrs. Reed that the butter was for his mother, an old customer, who was always supplied with margarine. Had Mrs. Reed thought that the article required was not for his mother she would have served him with butter, and not the margarine mixture. It was honestly served on the part of defendant, whilst the action of the prosecution was one of entrapping, which ought not to be resorted to in the case of a respectable tradesman.

The defendant, sworn, said that Littlefold's mother had for years been a customer at his shop, and she was always served from the tub over which the ticket "Margarine" was exhibited. He honestly believed that the "mixture" with which the boy was served was for his mother. He was astonished when Mr. Johnson entered the shop.

Mr. Ivory: I suppose now you have had some experience, you will not sell margarine again?

Defendant: Never again. This difficulty will be got over in that way.

Cross-examined by Mr. Johnson: The reason for the boy being asked whether the purchase was for his mother was because of his mother being usually supplied with the "mixture," and it seemed strange that butter should be asked for. He had no idea that the Inspector was in the neighbourhood. A man with rabbits on a stick did not come into the shop and say: "Old Johnson and his man are about! Look out!" (Laughter.) Had witness any idea that the butter was for Mr. Johnson the mixture would not have been supplied. (Laughter.)

The Bench retired to consider the case. On their return,

The Mayor said it was quite clear that the offence charged had been committed, and defendant would be fined the costs, £1 4s. The Bench were of opinion that it was reprehensible on the part of the boy to go into the shop and tell falsehoods, and hoped that Mr. Johnson would see that this did not again occur.

Mr. Johnson asked that the analyst's fee be allowed.

The Mayor said it was included in the penalty.

At Liverpool, on January 25th, William M'Dowall, Whitefield Road, was summoned for selling margarine as butter. Margaret Baker said that on the 30th ult. she visited defendant's shop and asked for 1lb. of shilling butter, which she received and paid for. She then called Inspector Baker and handed him the article. Inspector Baker said he received the sample from the last witness. An analysis showed that the sample contained 12½ per cent. of water and upwards of 70 per cent. of fat other than butter. A fine was imposed of £3 and costs.—The defendant was also fined 10s. and costs for selling to Margaret Baker ½lb. of margarine without the word "Margarine" on the wrapper. The defendant said his assistant served the articles, and had made a mistake in giving margarine for butter. He ought to have used the wrappers for the margarine, which were in the shop.

FALSE BRANDING OF MARGARINE.

AN INTERESTING REVELATION.

At Mansion House, London, on January 24th, E. Semprini appeared before Mr. Alderman S. Green on six summonses issued under the Margarine Act and the Merchandise Marks Act for forwarding margarine without consigning it as margarine, for not branding "Margarine" on the packages, and for applying a false trade description to it.—The Defendant pleaded Not Guilty.—Mr. Bodkin

appeared for the prosecution: Mr. Newton, solicitor, defended.—Mr. Bodkin said that the prosecution was instituted by Messrs. Vanderhaege and Co., provision merchants, of Charterhouse Street, against the Defendant, who traded as Edwards and Co., 13, Trinity Square, Tower Hill. In October last some transactions in the purchase of eggs took place between Defendant and Mr. Hodder, of the firm of Vanderhaege and Co. In November the Defendant said he had had a large quantity of good Swiss butter consigned to him which he would be very glad if Messrs. Vanderhaege would sell on commission to their customers. Mr. Hodder agreeing to that, a quantity of the so-called Swiss butter was forwarded to Messrs. Vanderhaege and Co., and they distributed it among their retail customers; but neither on the parcels of butter nor the baskets was there any description. In the consignment notes, however, the butter or material was described as "fresh butter" or "butter," and this was the alleged false trade description. The firm had some of the butter consigned to them by the defendant analysed. The analysis showed that 70 per cent. of it was margarine and 30 per cent butter. Inquiries were made, and it was found that the material was bought by the defendant from a London trader as margarine and paid for as margarine.—Evidence was then given in support of the summonses. Defendant was called as a witness, and said he had paid butter price for the material, which he bought through a friend.—Mr. Alderman Green said he was satisfied that the case on each summons was proved against the defendant, and he thought it was a very bad set of cases. He fined the defendant £10 and £2 2s. costs on each summons, or ten days' imprisonment on each summons consecutively.

MILK ADULTERATION AMENITIES IN SHEFFIELD.

At Sheffield, on January 25th, John Fawcett, farmer, and Tom Towers, both of Norton, appeared in answer to summonses charging them with selling milk that was not of the quality demanded. Mr. W. H. Collingwood prosecuted on behalf of the Corporation, and Mr. G. Bennett appeared for the defence.—Mr. Collingwood stated that the summons against Fawcett, who was master to Towers, had been withdrawn. On December 21st Inspector Druro, inspector of nuisances, bought a pint of milk from Towers in Woodhead Road, and submitted a sample of it to the public analyst. It was found to contain 12 per cent. of added water.—For the defence, it was stated that Towers and his companion, Frank Starkey, ran short of milk, and purchased some from a man in Abbeydale Road, and it was part of this milk that the inspector bought. A warrant was not, however, given with this milk.—A fine of 10s., including costs, was imposed.

George Arthur Dowes, trading as the Callow Park Milk Company, and James Critchley, 27, Thomas Street, were summoned for a similar offence. Mr. W. H. Collingwood prosecuted and Mr. A. M. Wilson defended.—Mr. Collingwood stated that a sample taken by the inspector from Critchley in Shoreham Street on the 21st of December, having been submitted to the Public Analyst, was found to contain water to the extent of 7½ per cent. The defence relied upon a guarantee from the person from whom the milk had been bought, but he contended that it ought to be clearly shown that the milk formed part of that which was supplied to the inspector.—Evidence having been given, Mr. Wilson said that the milk was bought from a wholesale vendor in Derby, and the defendants had an agreement from that vendor which warranted the milk as pure and with all its cream. From every portion of milk that was taken out by the carrier there was taken a small quantity in a bottle and this was kept as a protection against the man himself. The sample of milk that was received from the Corporation on the 21st December was sent along with the sample that had been kept by the company to the company's own analyst in London; and he found that the milk was adulterated to the extent of 9 per cent. and not 7½.

Mr. Wilson proceeded to put in the analyst's certificate, but Mr. Collingwood objected to this.

Mr. Wilson : I shall not admit your analysis unless you admit mine. If you don't it will be absolutely necessary that the case be adjourned. We must have an opportunity to call the man himself.

Mr. Collingwood : This is not the proper way to prove the case, and I object to it.

Mr. Wilson : Do you challenge us that we put this water in?

Mr. Collingwood : I don't issue any challenges.

Mr. Wilson : I am sorry I stated the case; it is disgraceful.—Mr. Wilson added that the question was, whether the analyst that the prosecution employed or the company's analyst was right.

Mr. Collingwood : Mine is a public analyst.

Mr. Wilson : And mine is a public analyst, and yours has often been wrong; he's wrong in this case.

Mr. Collingwood : I don't think it is necessary to bring this analyst from London. That certificate is not at all necessary.

Mr. Wilson : Don't teach me how to conduct my case. I have forgotten more than ever you knew.

After further discussion, it was decided to proceed with the case, and the magistrates dismissed both summonses.

WATERED MILK IN GLASGOW.

SHERIFF BOYD had before him, on January 24th, William Carmichael, wholesale and retail dairyman, 88, Eglinton Street, who admitted having on Tuesday, November 15th, sold a pennyworth of sweet milk which contained 6 per cent. of added water, and was also deficient in natural fat to the extent of 27 per cent. He pleaded that the milk in question was supplied to him by another dairyman. Sheriff Boyd asked whether accused received a guarantee of purity with the milk, and accused replied in the negative. His lordship expressed surprise at the scarcity of such guarantees, and, addressing accused, said : You have heard of such things? Accused said he sometimes received a guarantee from a farmer, but he had never received one with milk from another dairyman. He understood, too, that a year's contract was necessary before a guarantee was given. His lordship : You are entitled to a guarantee with all milk supplied, and you should make it a part of the bargain. Mr. Lindsay pointed out that accused being a wholesale as well as a retail dairyman, other dealers ran the risk of prosecution by selling the milk supplied by accused. His lordship said he regarded the offence as a serious one, and imposed a fine of £10, with £2 15s. expenses.—Henry James M'Cormick, dairyman, 268, Crookston Street, denied a charge of having, on November 15th last, sold to a sanitary inspector one pennyworth of sweet milk which on analysis was found to contain 5 per cent. of added water. He was convicted on the evidence of two food inspectors. Mr. John Lindsay, who prosecuted, said that although this was not a bad case, the shop was situated in a popular and poor locality in the South Side. The Sheriff, remarking that in such a locality people were presumably less able to look after themselves than those in wealthier districts, imposed a penalty of £4, including expenses.

DISEASED RABBITS—A DANGEROUS CUSTOM.

At Newcastle, on January 25th, John Smith, poulterer, Butcher Market, was summoned for selling ninety-four rabbits in such a state as to be unfit for food on December 17th. Mr. Sanders prosecuted, and Mr. Ed. Clark defended.

Mr. Roberts said the issue was whether or not the rabbits were sound at the time they were sold to the man in whose possession they were afterwards found.

Mr. Sanders said the charge was brought under the Public Health Act. The facts were that on Sunday morning, December 18th, P. C. Kelly, who was on duty in Pilgrim Street, had his attention drawn to a barrow-load of rabbits, which was in charge of a man named Blakey. The

ell from the rabbits was so offensive that the officer

brought Sergt. Carr, who ordered the rabbits to be taken to the Central Police Station. There they were inspected by the authorities, and pronounced unfit for food. Blakey, who was in Mr. Smith's employ, said he had bought all the unsold rabbits from his master on Saturday night, and was selling them on the Sunday morning for his own profit. The man paid a sovereign for ninety-four rabbits, and he would draw their Worship's attention to the fact that this was about 2½d. for each rabbit. He would bring evidence to prove that, from the condition the rabbits were found to be in on the Sunday morning, they could not possibly have been fit for food on the previous night.

Mr. Clark : I will prove that on the Saturday night they were absolutely sound.

P. C. Kelly said that at 9.45 on December 18th he had his attention drawn to the rabbits on Blakey's barrow entirely by the offensive smell.

By Mr. Clark : He did not examine the rabbits. He dare not go within 15 yards of the barrow. The weather was mild for the time of the year.

Sergt. Carr spoke as to the foul smell of the rabbits. They were minus their skins, and were all green and black in colour. When he went up to the barrow, a woman came up and returned two of the rabbits she had bought.

Supt. Fyfe said the stench from the rabbits at the station was something terrible. Some of them were almost rotten. They had to use carbolic acid about the place where they were kept.

Inspector Dodd, of the Health Department, said that when he examined the rabbits at 11 a.m. on December 18th they were in such a condition as to render it impossible for them to have been fit for food twelve hours previously. He thought a skinned rabbit under ordinary conditions would keep a couple of days.

Inspector Hedley bore out this opinion. He saw the rabbits on Monday morning—

Mr. Clark : I admit that on Monday morning the rabbits were rotten and putrid, filthy and disgusting. We only sold the rabbits on Saturday.

Dr. Armstrong said he saw the rabbits on Monday, and could only endorse Mr. Clark's description of them. In his opinion, the rabbits, thirty-six hours before he saw them, were distinctly unfit for food. If eaten on Sunday they would have been a positive danger.

Mr. Clark : Well, it is fortunate they were not eaten on the Monday, or they would have killed the nation. (Laughter.)

Dr. Armstrong, continuing, said he saw no evidence of disease. The signs were those of decomposition, which did not take place so quickly as Mr. Clark would lead the Bench to expect. He thought that rabbits packed for two days would be in a fair condition.

For the defence, Mr. Clark said the price at which his client sold the rabbits had nothing to do with the case. It was a common enough thing—and especially in London—for poulterers to give away their unsold stock on Saturday nights whenever it was thought likely that it would not keep until Monday morning. Mr. Smith's practice was to give his man Blakey the chance of any such clearance, so that he might hawk the rabbits the next morning. Now, on Saturday, December 17th, when the weather was admittedly warm, Mr. Smith received a large consignment of rabbits from Lord Inneskillen, of Closeburn Castle, Dumfriesshire, the price paid being 1s. 6d. the couple. They were shot rabbits, and as soon as they arrived they were all skinned for the purpose of ready sale. His own experience was that shot rabbits did not keep so well as hung rabbits, and skinned shot rabbits, in warmish weather and under unfavourable conditions, were liable to go bad much sooner than any. Thus it happened that while this consignment of rabbits was in good condition all that day, they had doubtless become affected on the Sunday and Monday. He would prove that the rabbits, which were the residue of the stock, were in good condition at 11.30 p.m. on Saturday night, and that had any customers presented themselves at that late hour they

would have been at once accommodated with the rabbits at the ordinary price. But the rabbits being left, and it being unlikely that they would keep till Monday, Mr. Smith gave his man the opportunity of buying them for a sovereign. All his client was concerned with was the condition of the rabbits when they were sold, and as he would prove that they were then all right, he asked that the case should be dismissed.

The man Blakey, questioned by Mr. Clark, said that when he bought the lot on Saturday night, he packed them in a tin trunk for the night. In his opinion the rabbits were in capital condition on the Sunday morning.

Mr. Smith bore out Mr. Clark's statement. The rabbits, when he sold them on Saturday night, were in good condition. He had only received them at 11.30 the same morning. It was not possible to keep skinned rabbits for three days.

Cross-examined: He would certainly have expected these rabbits to have been putrid on the Monday morning.

Mr. Sanders: Did you see the rabbits on the Sunday morning?—Yes.

Mr. Sanders: Were they in good condition then?

Witness: Yes, of course they were.

An assistant in the defendant's also deposed that the rabbits were all right when sold on Saturday night.

The Bench said the case had been proved, and fined defendant £10 and costs.

"GOLDEN SYRUP."

At Southwark Police Court on January 26th, George Simons, of Bermondsey New-road, appeared in answer to an adjourned summons issued at the instance of Mr. Henry Thomas, chief sanitary inspector to the Bermondsey Vestry, for selling golden syrup to the prejudice of the purchaser. The contention of the vestry is that golden syrup should be a refined treacle, made from cane sugar. They secured a conviction in December, and as the defendant gave notice of appeal, this summons was adjourned pending the decision of the higher Court. The appeal was, however, subsequently withdrawn. Mr. Thomas said that the golden syrup sold by defendant was labelled "golden syrup—purity and flavour guaranteed." The analyst's certificate stated that it was composed of 85 per cent. of glucose sugar and 15 per cent. of cane sugar. Defendant said that he bought the syrup from a respectable firm, and received a warranty with it.—Mr. Thomas observed that in these circumstances the defendant would have a claim against the wholesale firm.—Mr. Slade imposed a fine of 10s. and 12s. 6d. costs.

MAIZE ADULTERATION OF SELF-RAISING FLOUR.

A DEPUTATION from the Birmingham Master Bakers' Association waited upon the Health Committee of the Birmingham City Council last week in reference to a question of the use of maize flour in self-raising flour. Alderman Bowkett, in introducing the deputation, said they were totally out of sympathy with the views expressed by the deputation from the Grocers' Association. They did not wish to do anything antagonistic to the Grocers' Association, but they did want to put themselves right with the public in the matter. He understood that a member of the grocers' deputation made a statement to the effect that he should not know where to go to get pure self-raising flour. Now, that statement they wished to combat. He (Alderman Bowkett) could give them many instances and places where good self-raising flour could be obtained. More than that, they wished to contradict the statement that it was necessary to introduce foreign ingredients into self-raising flour. They, as practical men, did not agree that it was necessary to introduce a certain proportion of maize into the flour. They might go any day into the bakehouse of a respectable confectioner and see wholesome pastry made with pure self-raising flour. All that need be used was pure flour, and a small quantity of tartaric acid and other chemicals, which was necessary to bring about the desired

lightness. What the Grocers' Association said could not be done was done every day by every respectable member of the baking trade.

Eventually the deputation withdrew.

BELLADONNA PLASTER PROSECUTION.

EUGENE COMPIGNE, chemist, carrying on business in Camberwell Road, was summoned, at the instance of the Camberwell Vestry on January 26th, for selling to the prejudice of the purchaser a certain drug, to wit, belladonna plaster, which was not of the nature, substance, and quality of the article demanded by the purchaser. Mr. H. C. Biron appeared in support of the summons, and Mr. Jonas, solicitor, defended. Acting under the directions of Mr. C. H. Kerslake, an Inspector in the service of the vestry, a lady entered the defendant's shop, and purchased six belladonna plasters. A portion of each plaster was submitted to the Public Analyst, who certified that they were only 50 per cent. of the strength laid down by the "British Pharmacopœia." The defendant said that he asked the lady who made the purchase what sort of plaster she wanted, as he had several sorts. As she said she did not know for what the plaster was required, he gave her a small piece of plaster, and told her that she had better see whether that was the sort which she required. She came back, and said that was what she wanted. It was the kind of plaster used in 99 cases out of every 100 during the past twenty years, and was actually a more expensive article than the new plaster of the "British Pharmacopœia" of 1898. He would not supply the new plaster except when it was prescribed, on account of its strength. In answer to the magistrate, the defendant said that many people were very susceptible to the poison of belladonna, and he considered a plaster of the strength laid down by the "Pharmacopœia" to be dangerous if indiscriminately used by people who did not understand what they were doing. Mr. Hopkins remarked that he did not say the defendant was defrauding the public, or anything of that sort, but he was selling a drug without informing his customers that it was not up to the strength which they were entitled to demand. There would be a penalty of 40s. and 17s. 6d. costs.

IMPORTANT CASE OF FALSE LABELLING OF SEIDLITZ POWDERS.

WILLIAM GRIFF, of St. John's Packing Company, 17, Devonshire Square, Bishopsgate Street, London, was summoned to Brentford on January 26th, for putting false labels on "Seidlitz Powders."—Inspector Tyler said the summons was taken out for the benefit of the small shopkeepers who sell these drugs. A Mr. Brown, of Ealing, had been summoned recently for the selling of improperly prepared seidlitz powders, which he had obtained of Messrs. Aldridge and Company, of London, who bought them of the St. John's Packing Company. This company was, therefore, now summoned for putting a label on the packets setting forth falsely the contents. This was the first wholesale dealer who had been summoned under the section in the county of Middlesex.—The defendant said the powders were prepared exclusively for Messrs. Aldridge and Company according to their prescription.—A fine of £10 and £3 3s. as costs were imposed.

FARMERS' ASSOCIATIONS AND TUBERCULOSIS IN ANIMALS.

At a meeting of the Farmers' Club, on January 30th, at Salisbury Hotel, Fleet Street, a paper on "Tuberculosis in Animals on the Farm" was read by Professor Penberthy. Mr. E. K. Fisher presided. After briefly sketching the history of the disease, the lecturer said experiment had proved that the bodies of all animals of the farm afforded conditions favourable to the growth and development of the tubercle bacillus. Until 1894 the great obstacle to dealing with the disease in a radical manner lay in the fact that the

majority of animals affected with tuberculosis yielded no distinctive symptoms; indeed, most frequently showed the bloom of health. The advent of tuberculin removed all the obstacles to diagnosis, but it was necessary to bear in mind that up to the present tuberculin merely told them what animals were and what were not tuberculous; it did not directly indicate what animals discharged bacilli, and were therefore dangerous, though it might prove of material assistance in forming such an opinion. The question now arose—was it desirable to know whether farm animals were affected with tuberculosis, or to proceed on the old lines and disregard it? That there was a real danger of men contracting tuberculosis from drinking milk and eating flesh there could be no doubt, and the public had a right to demand that any article of commerce should be free from such danger. The cost of applying the tuberculin test was the only relief that the stock-owner had immediate prospect of. *Prima facie* the trouble of isolation would cost him no less than if he had paid for the testing, while one could scarcely fail to see that the conditions under which the proposed gratuitous testing was to be carried out might be such as to affect seriously his convenience and his pocket. There was no cogent reason for delay, therefore, and he thought he was wisest who began at once to discover what animals in his herd were tuberculous, as he would thereby be able to check his losses caused by the disease, and place himself in a superior position as regarded disposal of his produce.

Mr. W. Hunting, F.R.C.V.S., an ex-president of the Royal College of Veterinary Surgeons, read a paper on "Tuberculosis in Animals," at a meeting of the Society of Arts, held at John Street, Adelphi. Mr. R. B. Carter, F.R.C.S., presided.

Mr. Hunting described tuberculosis as a disease which is spread solely by the transmission of the microbe from diseased to healthy bodies. After enumerating the suggested methods of dealing with the plague, recommended by the Royal Commission on Tuberculosis, and other authorities, Mr. Hunting said our administrators knew perfectly well what their trusted advisers had recommended, and what ought to be done. The loss from tuberculosis was 70,000 persons and 40,000 cattle every year. Was this not sufficiently serious to demand action? Legislation was inevitable, and it must follow the lines indicated in the summary of recommendations he had given. The hesitation of the Government to undertake legislative interference was due simply to fear of movement until the public, or a majority, were convinced of the necessity. The public were being rapidly educated.

He suggested that local authorities should pay as compensation £2 per head for all animals compulsorily slaughtered of a value not exceeding £8; and a sum equal to one-fourth the market value of all others seized—but no animal should be valued at over £24. Any salvage on carcases, minus the cost of removal and slaughter, should be repaid to the owner. Voluntary effort was insufficient, and the protection of human life would be most effectively undertaken by measures which applied to all animals, and not to those only which were in the hands of butchers and cowkeepers.

THE PRESIDENT OF THE BOARD OF AGRICULTURE AND ADULTERATION.

SPEAKING at Newcastle on January 28th, Mr. Long, replying to the toast of "Success to Agriculture," said he should like to deal in the coming session with another subject, but as he was not the only Minister of the Crown he must take his chances with the others. He referred to adulteration so far as it affected agricultural products. He would introduce a Bill on the subject, which he believed would largely reduce, if it did not wholly get rid of, that unfair competition by adulterated produce with pure produce against which the British farmer had every right to complain. The British trader was as much concerned in this matter as the British farmer, and the demand for legislation had proceeded as much from traders as farmers.]

FILTHY CISTERN SYSTEMS IN LARGE ESTABLISHMENTS.

THE outbreak of typhoid at the drapery establishment of Messrs. T. Wallis and Co., Holborn Circus, amongst the male employees of the firm, resulted in disclosure that the cause of the fever has been traced to the use of drinking water supplied from one of the cisterns.

It is astonishing how large establishments blindly endanger their trade, their shareholders' money, and their employees' lives by persisting in disease-distributing cisterns or old-type filters when the researches of Pasteur and his filter invention ensure perfect immunity for all using Pasteur filters.

REPORT OF THE PUBLIC ANALYST TO THE COUNTY BOROUGH OF SALFORD.

MR. J. CARTER BELL reports: During the quarter ending December 25th, 1898, I have analysed 203 samples, consisting of 88 milks, 82 butters, 10 breads, 14 spirits, 4 eucalyptus oils, 2 castor oils, 1 paregoric, 1 lard, and 1 tinned peas. Of these 9 were adulterated, namely, 4 butters, 1 milk, 2 eucalyptus oils, 1 whisky, and 1 tinned peas. The butters were adulterated with from 38 per cent. of foreign fat to 75 per cent. The milk sample one could hardly call adulterated, as judged by a very low standard there was only 1 per cent. of water. The whisky contained 10 per cent. of water in excess. In addition to the very liberal allowance authorised by the Act of Parliament, the total amount of water in this whisky was 70 per cent. The two samples of eucalyptus oil contained other terpenes of a cheaper kind, but in some cases the quantity of oil I had to work upon was so small that in one case it amounted to only a few grains, therefore it was impossible to make an exhaustive analysis. The sample of tinned peas contained copper equal to nearly two grains of crystallised sulphate of copper. Four of the above were private samples, namely, one tinned peas and three butters. Of these two were adulterated, namely, one peas and one butter.

During the year 788 samples under the Food and Drugs Act have been analysed, and out of that number only 27 have been returned adulterated, or slightly over three per cent. This will compare favourably with any town in England. A great number of the samples have been what is called test samples, that is, not actually bought by the Inspector, but by some stranger instructed by him. This fact alone speaks volumes for the tradespeople of Salford, for when the Inspector is known it is only natural to think that he will be served with pure articles. I strongly advise the continuation of the purchasing of test samples, as it is a saving of two-thirds of the expense of time and money, and also more accurately shows what is really being sold in the borough.

The milk supply for 1898 has been remarkably good, and during my 25 years' experience as analyst for Salford I do not remember any year as good as this. For out of 365 samples 347 were above the standard, and even the remaining 18 would have been passed some years ago as milks of fair average quality.

Taking 12 per cent. of total solids and 3 per cent. of fat as the standard, the following will show how much above the standard the 347 samples were: 2 milks contained over 10 per cent. of total solids, 16 over 11 per cent., 194 over 12 per cent., 142 over 13 per cent., 7 over 14 per cent., 3 over 15 per cent., and 1 over 16 per cent.

One must not lose sight that this great improvement in the milk supply is chiefly due to the careful and systematic manner in which the Inspector collects the samples.

It may be of interest to some members of the Corporation to know how many samples have been analysed for the various Committees during the year just closed. The total number which I have analysed is 3,241, comprising foods, paints, oils, mortars, cements, lime, sewage and effluents, etc.

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Food and Sanitation.

SATURDAY, FEBRUARY 11TH, 1899.

SPECIAL NOTICE.

CHANCE OF ADDRESS.

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THE NEW ADULTERATION ACT.

I.—PRESERVATIVES IN FOOD.

Now that Parliament has once more begun business and the Government has seen that it must legislate on adulteration it behoves all concerned with the manufacture and the sale of food, drugs, and drink to keenly examine every new proposal and see how it affects trade and public health. The question of preservatives in food, in particular, is one which must be dealt with, and the mass of evidence, *pro* and *con*, which we have placed before our readers during

the past seven years will enable them to appreciate its full importance to a far greater degree than will be the case with readers of the ordinary trade papers.

There are strenuous and able advocates of the use of boracic acid, like Mr. R. Gibson, of Limerick, who claims that boracic acid is not injurious to health but absolutely beneficial. Against the zeal for the use of this preservative, displayed by Mr. R. Gibson and Mr. Robotham, must be placed the cases recorded in this journal by careful medical practitioners who have no interest to serve beyond that of scientific truth and public health, of instances wherein the use of boracic acid was found to be injurious to health. To these must be added the following:

SYMPTOMS OF POISONING BY BORACIC ACID.

A short time ago, while attending a lady suffering from long-standing inflammation of the bowels, I ordered irrigations of boracic acid twice daily—a tablespoonful to a pint of warm water. The result was most satisfactory as regards the disease; but, after three or four injections, she began to complain of headache, slight nausea, and intense dryness of the skin. On discontinuing the use of the boracic acid injections the symptoms ceased, to commence again with the resumption of irrigation. They ceased only when the disease was so far cured that we were able to use a solution of half the strength once daily. — Sophia Grumpelt, M.D. Bern., Cape Colony.

It would appear that the use of boracic acid illustrates in a remarkable degree the old saying that "what is one man's meat is another man's poison," seeing that Mr. Gibson and Mr. Robotham testify so strongly to its harmlessness.

It is by no means surprising therefore that the President of the Local Government Board is being urged to appoint a committee of experts to examine and report upon the much-vexed question of food preservatives. This matter has formed the subject of frequent Parliamentary interrogation, both of Mr. Chaplin and Mr. Long, but no departmental attempt has yet been made to solve the difficulties with which it is surrounded. The desire of those who are in the habit of making use of these preservatives is to induce the Government to declare once and for all whether they are injurious to the public health, and, if they are not, to lay down the maximum quantity which may be introduced into food products without rendering a manufacturer or dealer liable to prosecution for any offence under the Public Health Act or the Food and Drugs Act.

Against this proposal for a full inquiry into the question of preservatives we have the alternative proposal of the Society of Public Analysts and some others that a Court of Reference be appointed under the new Act, empowered to lay down standards as to what is pure food. Rightly or wrongly the public analysts are regarded by traders as wishing to "boss" the new Act, and upon questions so very debatable as this of preservatives in food many manufacturers and retailers see that much loss may be inflicted on English trade, with no benefit to public health, should the question of preservatives in food be approached in too doctrinaire a spirit. Its ultimate solution may be only through such a committee of experts as is called for, but in the meantime traders should know that if they sell butter, milk, or other articles of food containing boracic acid they are liable to prosecution, and that such prosecutions have in several cases in different parts of the kingdom been successful. So recently as February 3rd, at Birmingham, Charles Abbott Tibbetts, provision dealer, Icknield Street, was summoned for selling butter containing 1 per cent. of boracic acid. Dr. Hill, Medical Officer of Health, stated that there were 70 grains of the acid to the pound, which was an unusually large proportion. The acid would have an injurious effect upon health, as it produced disorder of the stomach and sometimes eruption of the skin. Mr. Adcock, for the defence, said that the butter was part of a consignment from Adelaide, Australia. Mr. Adcock quoted some medical opinions obtained by the Grocers' Association showing that boracic acid in the proportion of one in forty would not be

injurious. The defendant had not tampered with the butter since he had received it, and the solicitor pointed out that eminent medical men did not consider 1 per cent. an excessive amount. There was no intention to deceive the public, and if boracic acid had not been used they would have substituted salt or saltpetre, which were equally bad. A fine of 40s. and costs was imposed, and Mr. Fisher intimated that if any other cases came before them a heavy fine would be inflicted.

Until this question is definitely settled traders who wish to keep their reputations and avoid loss and worry will do well to insist on obtaining guarantees that the butter they sell contains no boracic acid, as they are liable to prosecution every day, and even if Parliament be never so willing many months must elapse ere in a new Adulteration Act it can pronounce upon the question.

MARGARINE AS BUTTER.

At Chester on January 30th Daniel M'Call was summoned for exposing on his stall a quantity of margarine not labelled as prescribed by the Act. Mr. Samuel Smith, Town Clerk, prosecuted, and Mr. W. H. Churton defended. Mr. Wharton, Sanitary Inspector, deposed that on Saturday, December 31st, he found on the stall a dish with something on it having the appearance of butter, and which was marked "Delicious." Mr. Wharton asked for a pound of butter, and defendant's manager told him it was margarine. Fined 40s. and costs.

At Highgate Petty Sessions, Frank Osborne, of Turnpike Lane, Hornsey, was summoned for selling to Inspector Bridge butter which was found, when analysed, to be adulterated with 60 per cent. of foreign fat. A second summons charged him with selling margarine in a paper not marked "margarine." Mr. Hutton, solicitor, appeared for the defence. It was proved that the article sold was wrapped in a piece of paper upon which was printed "Absolutely pure butter." Half a pound was purchased, and 5d. was paid. Defendant said he bought the article as absolutely pure butter, and sold it as he received it. He produced invoices which he said had reference to the butter he purchased from a firm trading as Edwards and Co. Mr. Cory-Wright: I see you paid 11d. a pound. How is it you sold it for 10d.? Defendant: I sold it at a loss in order to make up the business, which is a new one. Mr. Hutton said the wholesale firm from which the defendant dealt with had recently been prosecuted, and convicted for six offences under the Food and Drugs Act. The Bench inflicted a fine of £10, and costs.

At Lambeth, on February 2nd, Evan Morgan, of Walworth Road, who was described on the summons as trading as "Morgan Bros.," and "Morgan and Co.," was summoned at the instance of the Camberwell Vestry for selling butter not of the nature, substance, and quality of the article demanded by the purchaser. There was a second summons against the defendant for delivering margarine to the purchaser otherwise than in a properly printed wrapper. Taking advantage of a provision of the Margarine Act the defendant had taken out a summons against one of his assistants, John Thomas Hampton, as being the actual offender, and as having committed the offence without his knowledge, consent, or connivance.—Mr. Lushington appeared to support the summonses on behalf of the vestry, and Mr. Ricketts represented Mr. Morgan.—The case was heard at some length. It appeared that last month Mr. C. H. Kerslake, an inspector in the service of the vestry, placed himself in communication with a small trader at Camberwell who had been proceeded against by the vestry, and arranged that an order should be sent to the defendant's shop for 6lbs. of margarine at 6d. per lb. and 4 lb. of pure butter at 10d. per lb. The defendant's assistant, Hampton, executed the order, and the articles supplied were taken possession of by Inspector Kerslake immediately the purchase had been completed. One of the parcels was marked "margarine" in black-lead pencil, and the other parcel had "butter" written upon it. The inspector divided the "butter" and

submitted a sample to the public analyst, who certified it to consist wholly of margarine.—Mr. Lushington sought to call evidence showing what he described as the ramifications of the Morgan family, but Mr. Ricketts successfully objected to the form in which the vestry were endeavouring to support that part of their case.—For the defence Mr. Ricketts asserted that the defendant was only interested in two shops—one in the Walworth Road and the other in Westmoreland Road. Morgan was a very common Welsh name, as common as Jones. Hampton, the defendant's assistant, was instructed to strictly comply with the requirements of the Food and Drugs Act and the Margarine Act, and to sell butter only when butter was asked for, and when margarine was required to sell it as margarine in a properly stamped paper.—The assistant (Hampton) was called, and explained that on the day the purchase was made it was his afternoon out, and he was in a hurry to get away. By mistake he put the butter in the margarine paper, and the margarine in the butter paper.—Mr. Hopkins dealt with the defendant Morgan on the margarine summons, and ordered him to pay a penalty of £20 and £5 5s. costs. The summons against the assistant Hampton was dismissed, and the summons which the vestry had taken out against Morgan in respect of the sale of the butter was withdrawn.

At Thames, on February 4th, Thomas Jones Davis, grocer, of 105, Crisp Street, Poplar, was summoned before Mr. Dickinson for selling butter adulterated with 98 per cent. of foreign fat.—Mr. Eustace Miners, one of the inspectors under the Sale of Food and Drugs Act for the Poplar District Board of Works, proved the case, after which Mr. Young, who conducted the prosecution, said the defendant had rendered himself liable to three penalties. He was in a very large way of business, having another shop at 103, Bridge Street, Mile End, and had been twice fined, the last time £15.—Mr. Dickinson now imposed the full penalty of £20 and 25s. costs.

IMPORTANT COFFEE PROSECUTION.

At Wolverhampton, on February 1st, Messrs. Pearks, Guston, and Tee (Limited), grocers, were summoned for selling adulterated coffee. John Blow, an assistant in their employ, was summoned for a similar offence. Mr. G. F. Allwood, Inspector of Food and Drugs for the Borough of Wolverhampton, prosecuted, and Mr. F. W. Beck, of London, defended.—Mr. Allwood, in opening the case, said the defendants were in a large way of business, and had a branch shop known as the Midland Stores, Queen Street, Wolverhampton, and other branches in most of the principal towns. He (Mr. Allwood) noticed that at the annual meeting of the company, recently held, the chairman complimented the shareholders on the fact that a profit of over £14,000 had been made during the year. The facts of the present case were that on December 14th last an assistant was instructed to visit the Midland Stores and make certain purchases, including 3 lbs. of coffee at 1s. 2d. per pound. Nothing was said at the time of the sale that the latter article was not coffee, but on opening the parcel he (Mr. Allwood) found that the bag which contained the article bore the following statement: "This is sold as a mixture of coffee and chicory." He informed Blow, who made up the parcel, that the coffee had been bought for analytical purposes, and it was then divided into three parts, one being subsequently submitted to the public analyst. He had since received a report from the analyst, which stated that the article asked for was a mixture of coffee and chicory, and that it contained 74 per cent. of the latter. He submitted that that was an undue proportion of chicory, as coffee was asked for, and represented to have been supplied.—Evidence having been given bearing out the above statement, Mr. Beck, for the defence, said Mr. Allwood had discovered a somewhat new and adroit way of enforcing the Act, which had points to recommend it, but at the same time did not give much chance to the vendor. He should fall back on Section 14

of the Act, which said that "the person purchasing any article with the intention of submitting the same to analysis shall, after the purchase has been completed, forthwith notify the seller, or his agent selling the article, of his intention to have the same analysed by the public analyst." He submitted that neither Mr. Allwood nor his assistant had complied with the Section, and called witnesses to prove that half-an-hour elapsed between the sale of the goods to the assistant, and the notification by Mr. Allwood to Blow. The Stipendiary said he thought the Section had not been complied with, and dismissed the case on that technicality.—Defendants were afterwards fined 2s. 6d. and costs for having in their possession an unstamped scale for business purposes.

IMPORTANT SEIZURE OF TINNED AND OTHER ROTTEN FOODS.

A SEIZURE of a great quantity of tinned meat in a condition which rendered it dangerously unfit for consumption as food was made in Shadwell on February 6th. Dr. Thomas, of the Sanitary Staff of the District Board, had his suspicions aroused in connection with the consignment of some thousands of tins of various kinds of meat to a warehouse in Shadwell. He kept watch, and with the assistance of his staff entered the warehouse and seized every tin of meat on the premises. The tins contained beef, brawn, chicken, ham, and tongue. Dr. Thomas found that hardly a tin of the whole consignment was in a fit state for consumption. The whole lot was at once carted away to await the inspection of a magistrate, but owing to the stench arising from them they were left in the open air. A large number of them was carted to the yard of the Thames Police Station, in Arbour Square, where they were inspected by the magistrate. He made the examination with a handkerchief to his nose, and a few minutes later, being assured that those he had inspected were a fair sample of the bulk of the consignment, at once condemned the whole. Dr. Thomas had the tins weighed, and found that they were just a few pounds over 4 tons 3 cwt. The original value would not be less than between £350 and £400.

Application was made, on February 6th, at West Ham Police Court for an order to destroy 878 geese, 545 turkeys, 320 ducks, and 426 chickens. The consignment was landed in the Victoria Docks on Friday from the steamship *Oakmore*, from Boston, and was almost immediately seized by Inspector Spadaccini, whose duty it is to watch the food imports at the Docks. Out of the consignment of 2,169 birds, weighing nine tons, not one was sound, and it was stated that if in good order the poultry would have realised £500. Mr. Baggallay made an order for the destruction of the birds.

CAMPHOR.

At Enfield Petty Sessions, Walter George Clark was summoned by Mr. Bridge for selling camphorated oil 22 per cent. deficient of camphor.—Mr. Ivory defended.—Mr. Bridge said he purchased from the defendant's shop in South Street, Ponders End, 8 ozs. of camphorated oil, for which he paid 1s. 6d., and the analyst's certificate showed that it was not compounded according to the British Pharmacopœia—it only contained 16.67 per cent. of camphor instead of 21.43 per cent.—Mr. Bridge admitted that camphor was a volatile article, but it would not deteriorate, and was not a perishable article.—Mr. Ivory urged that it was, and said the summons was bad, as it had not been taken out within twenty-eight days.—Mr. Bridge urged that it was not a perishable article, as an article was only said to perish when it changed in such a degree as to stop analysis or interfere with it; this had not done so. Camphor would last in a bag to destroy moths for two years.—The Bench considered the case had been proved, and defendant was fined 20s. and costs, including the cost of analysis.

THE POWERS OF SANITARY AUTHORITIES TO ORDER CLEANING OF WINDOWS.

At the meeting of the Bermondsey Vestry, on February 6th, an interesting point with respect to the power of public health authorities was raised. It was proposed that a statutory notice be served upon a tenant in the artisans' dwellings, known as Wolseley's Buildings, to clean his windows.—Mr. Whitehead protested against this. They would next order men to change their shirts every week.—Mr. Pridmore, the chairman of the committee, replying to questions, said a case had never been brought into Court, but he was certain the public health authorities had power to compel persons to keep their windows clean. He contended that these tenements were registered lodging-houses.

It was decided to serve the statutory notice, as proposed.

THE DINNER OF THE SANITARY INSPECTORS' ASSOCIATION.

THE members of this association held their 16th annual dinner at the Holborn Restaurant on February 3rd. The chair was occupied by Sir John Hutton, and among those present were Sir Douglas Galton, Sir J. Crichton Browne, Mr. T. Mackinnon Wood (chairman of the London County Council), Archdeacon Sinclair, Dr. Farquharson, M.P., Sir H. Gilzean Reid, Archdeacon Stevens, Mr. T. J. Moss Flower, and Professor Banister Fletcher. In proposing the toast of the evening, "The Sanitary Inspectors' Association," Sir John Hutton said that, as to the *status* of sanitary inspectors, they had time out of mind recorded the fact that their appointments were of too precarious a nature to give confidence and comfort. At present a sanitary inspector was appointed for a single year only, and if he did his duty it was very likely he would soon be dismissed. There were cases on record in which the want of fixity of tenure had demoralised sanitary inspectors. They must educate the public until they brought about an alteration in that respect. In regard to remuneration, too, an improvement was necessary. It was absurd to think that an inspector could be properly remunerated by a pittance of £75 or £100 a year. A commencing salary of £150, rising by annual increments to £250, would be only a reasonable payment. In conclusion he denied that sanitary inspectors were the enemies of the people. They were the sanitary police, and as such they could not be bribed, and were worthy of their hire. Mr. T. J. Moss Flower, chairman of the council, having responded to the toast, the chairman, amid great enthusiasm, presented, on behalf of the members of the association, an illuminated address and timepiece to Mr. T. E. Dee, in recognition of his occupancy of the chairmanship of the council during 1897-98, and of his untiring zeal on behalf of the association; and an illuminated address and a handsome silver tea and coffee set to Mr. Edward Tidman, hon. secretary and editor of *The Sanitary Inspectors' Journal*, as an acknowledgment of his labours during many years in the cause of the association and of sanitation in London and the provinces.

THE ADULTERATION OF OATMEAL.

A MEETING of the directors of the Scottish Chamber of Agriculture was held on February 1st in Edinburgh. With regard to the question of the adulteration of oatmeal, discussed at the previous meeting, when it was decided to endeavour to arrange that the promised Adulteration Bill, which was to be under the charge of the President of the Board of Agriculture, should contain clauses sufficiently comprehensive to enable the Board to deal with cases of this nature, the Secretary stated that he had communicated to Mr. Elliott the request of the Chamber to send a representative to Edinburgh to meet the directors. Mr. Elliott had notified him that Mr. Long had agreed that one of the Inspectors of the Board should visit Edinburgh with a view to conference on the subject, and that the necessary instruction for this purpose had been issued.

It was stated that one of the main reasons of the low price of oats at present was that there was so much of this Canadian meal being mixed with home meal. There were some honest men in the trade, but a great many of their smaller millers were taking foreign meal to their mills and mixing it with Scottish meal, and, therefore, being able to quote low prices. Every day somebody was seeing the profit in the business, and was engaging in it. In one district the practice had been followed for at least fifteen to eighteen years of small local men getting considerable quantities of meal weekly or monthly to the railway stations. This meal went to the mills, and they never knew anything more about it.

The Secretary said that he had heard of a case in which quantities of foreign meal were sent from London to mills in the north, where the meal was put into new bags and sent back to London for sale as Scottish oatmeal; while the Chairman stated that the price of the foreign meal was two-thirds to three-quarters of the price of home meal. A committee was appointed to watch the progress of the Adulteration Bill.

POPLAR AND ADULTERATION.

THE Analyst (Mr. W. C. Young) reported that during the quarter ending December 31st he had analysed 81 samples, 75 of which were purchased and submitted to him by the Sanitary Inspectors, and 6 by a private purchaser. Of the latter, all of which were butter, 1 was genuine, and 5 adulterated with foreign fat. Of the 39 samples of milk 32 were genuine, of the 9 butters 7 were genuine. The honey, coffee, cocoa, peppers, mustard, vinegars, and brandies were all good. The malt liquors were all genuine. In Bow, of the 21 milk samples 20 were genuine, all the malt liquors were genuine, and of the 6 samples of spirits 4 were genuine.

HERTFORDSHIRE COUNTY COUNCIL.

REPORT OF THE COUNTY ANALYST.

THE quarterly report of Mr. A. E. Ekins, the analyst appointed for the county of Hertford, for the quarter ending December 31st, 1898, says that during the quarter ending December 31st, 1898, forty-four samples of food and drugs were submitted for analysis as follows: fifteen samples of butter, four samples of whisky, fourteen samples of milk, five samples of sugar, four samples of coffee, one sample of tincture of rhubarb, one sample of sago. Of these, five samples were adulterated. Legal proceedings have been instituted in each case of adulteration, and in every such case tried fines have been inflicted.

THE TIN USED IN FOOD CANNING.

THE amount of tin-plates used in food canning is immense, and most of the tin-plate so used is manufactured in South Wales and Monmouthshire (says *The South Wales Daily News*). All acquainted with tin-plate manufacture know that in the coating of tin-plates great changes have taken place, and it is a moot question whether the changes which have resulted in cheapening cost are not more or less answerable for the existence of poisoned food in tins, and this may ultimately be answerable for rejection of tin-plate cans for food packing. Cans must be faulty, or they will not become "blown." One thing is generally accepted—no firm of food canners is believed to be so unscrupulous as to can putrid food. The good food is believed to become putrid because the can is not air-tight, for it is known that if perfectly sealed the food will keep good for any length of time. It may be asked why are the tins not tested? Probably they are, and here it may be pointed out that tin-plate coated as much of it is at present may, after being tested, develop defects that would explain many of the complaints that we hear. Tin-plate can be manufactured of as good a quality to-day as ever. It is all a question of price, but to attain cheapness quality has been sacrificed. No doubt much of

the cheap tin-plate manufactured suits its purpose admirably, but in view of the complaints heard it may be reasonably inferred that tin-plates are used for canning food that should not be so used. Not long ago, plates designed for canning purposes were coated exclusively through palm oil. The rule is not so rigid now, but it ought to be, and food canners should certainly insist upon getting their plates coated through pure palm oil, and take care not to use any other. The plates generally used for canning purposes are only 0.123 of an inch in thickness, and about 2½ lbs. of tin are spread over 31,500 square inches, so the protection at best is small, and it will be realised that a slight defect in the coating may be answerable for much. Now the wearing quality of a sheet tinned through palm oil, even when the thickness of coating is the same, is superior to that of a flux-coated sheet, though the latter in appearance would be the better and brighter sheet. The acid flux has great affinity for water, and is answerable for the complaint of black spots often heard at works. Now, however carefully plates are assorted, sheets will pass with small black spots of the size of a pin's head. If this be of palm oil it matters not much, for that will not develop a defect, but let this be a black spot of acid flux and it will attract moisture, with the result that the naked iron is reached, oxidation takes place, and a defect develops which, in the case of a can of food, may prove highly injurious. If what has been advanced here is the cause of defective tins, in no way can tin-plate manufacturers be blamed. They, like other business men, are prepared to produce quality in accordance with price; but sufficient has been said to show that food canners cannot be too careful in seeing that the quality of tin-plate used by them should be the most suitable and reliable for the purpose.

BACILLI KILLED OFF WHILE YOU WAIT.

MR. NIKOLA TESLA, whose astonishing electrical discoveries have made him notorious throughout the world, has made a new and startling proposal, which is destined to arouse widespread interest.

Mr. Tesla, in a paper recently read before the Electro-Therapeutical Society, "claimed to have discovered a means of safely applying an electrical current of millions of volts to the human body, thereby destroying the bacilli of all diseases, including that of tuberculosis."

Mr. Tesla's theory apparently is that each cell of the human organism is a tiny electrical battery. This powerful current stimulates its action and causes oxidation of the tissue, which kills the bacilli.

The current is not sent through the body, but runs along the surface. It not only destroys the bacilli, but renews the energy of the body.

Another electrician, imitating Mr. Tesla, is reported to be preparing a patent of a similar invention. He proposes to incarcerate the patient in a glass case and apply a tremendous current to the outside of the glass. This material not being an absolute non-conductor, the current is diffused over the outside of the case and permeates all parts of the human body, and kills the germs and replenishes energy. The patient steps forth a new man.

New York scientific men are inclined to be sceptical regarding the alleged discoveries.

CHANGES WROUGHT BY BEER.

THE proprietors of Paris brasseries—beer saloons—are now serving a better meal at less cost than can be procured at the restaurants. They find that the more stimulating the food the greater the consumption of beer, from which they reap their profit. The decline of the Paris restaurant recalls its birth a trifle more than a century ago. The most famous one then was the Restaurant des Feuillants, on the Place de la Revolution, where the guillotine was erected. At this establishment on the menu of the day were printed the names of those who were to be decapitated about the dinner hour of the afternoon, which, of course, added to its attractions.

HEREFORD GUARDIANS AND THE MILK SUPPLY.

At a recent meeting of the Board Mr. Hatton spoke in favour of the following resolution, of which he had given notice: "That no milk tender should be accepted by that Board unless accompanied by a certificate from the Veterinary Inspector of the Local Government Board showing that the cows from which the milk is obtained are free from tuberculosis, and also that a similar certificate be presented to the Board each month by the person whose tender is accepted." He alluded to the Marlborough House meeting and the danger of drinking milk from cows suffering from tuberculosis, which was a deadly disease. The only way to get rid of the disease was, he thought, to kill the animals. Mr. Welsh thought this was a matter for the Board of Agriculture. He moved that no action be taken. The Rev. A. J. Capel seconded Mr. Hatton's motion. This was an important question. The Board should supply the inmates with wholesome food, and not quibble about expense in a matter of this character. Mr. W. H. Davies asked who was going to pay the veterinary surgeon for examining the cows? If the farmer had to do so, then he would have to charge more for his milk. No complaint had been made about their milk. This was a question for the Board of Agriculture. If they found a cow that had the disease, it should be branded or destroyed. Mr. Shaw, Mr. Walker, and Mr. Green spoke against the motion, which, on being put to the meeting, was rejected, only three members supporting it.

TO REVOLUTIONISE THE REFINED SUGAR TRADE.

THE French journal *La Nature* is telling us of a wonderful machine invented by M. A. Ladureau, chemical engineer, formerly a director of the French State Laboratories. This is to convert manufactured sugar into the refined variety, or, at least, into a product which contains all the qualities, both as to appearance and composition, of the lump sugar of commerce, with the facility of grinding coffee. The expense of this wondrous machine is £1,400. He makes use of No. 3 white sugars, and employs the article either in its common form of small crystals, or after having crushed them into a fine powder by means of a mill. He causes the crystals or powder to drop upon a thin cloth through a cloud of steam maintained at 98 deg. in order to moisten them slightly while heating them. After its quick melting under the heat, the mass is received in moulds of rectangular parallelo-pipedon shape; next it is suddenly recooled by a current of air caused either by a suction pump known amongst the trade as the *pompesucette*, or by forcing through it compressed air by means of an air-pump. The recoiling and rapid evaporation cause the crystallisation of the very small quantity of saturated syrup which had formed itself on the sides, and this crystallisation causes all the particles of sugar to adhere firmly, with the result that ten minutes after their being placed in the machine they can be drawn out in small ingots of sugar 20 centimetres long. It only remains then to break them into lumps and pack them; they are then ready for sale. In the loaf sugar trade there is always a certain proportion of waste from the shape of the loaf, from the conical crust, from the sawing in order to cut it into pieces, and from hard crystallisation at the top. But with the machine in question the necessity of remelting and recommencing crystallisation of this waste material is avoided.

THE TRADE IN "FAKED" WHISKY.

Considerable light is thrown on the foreign trade in spirits, exceeding one million pounds, with the Niger Coast Protectorate, as disclosed by a Parliamentary paper recently issued. A firm of East Indian merchants was recently offered by Hamburg exporters whisky at 2s. 11½d. per dozen case, and brandy at 3s. 10d. per dozen case, delivered free on board the steamer at Hamburg. The offer was accompanied with the stipulations that labels of any brand of

Scotch whisky or French cognac, which the East Indian merchants cared to select, would be affixed to the bottles. When it is remembered that these prices covered the cost of bottles, cases, packing, etc., as well as the actual spirit, it is very clear that the profit per case was extremely small. But the business pays well. It pays on account of its size. The amount of deleterious potato spirit, disguised by essences as rum, gin, whisky, brandy, and sherry, that is shipped annually from Germany must be enormous. Much of this German trash is said to be consumed in England. The Brussels Act precludes the sale of intoxicating liquors to native races. To whatever extent Germany may use her own colonies for the advancement of this liquor traffic, it should certainly not be permitted in British possessions.

THE ABUSE OF TUBERCULIN.

W. OWEN WILLIAMS, F.R.C.V.S., writes: Now that the world is stirring generally for the campaign against tuberculosis, a few words of warning may not be amiss. To hark back for a moment to the time when preventive inoculation for pleuro-pneumonia was practised. It was no uncommon thing for a man to chop off half the tail of a cow, and then sell her as having been rendered immune by inoculation. Quite frequently a man would, with a pair of rowelling scissors, make a couple of cuts on the under side of a cow's tail, and point to them, triumphantly declaring they were the signs of a successful inoculation! Why, when hard pressed for pure lymph, dishonest inoculators have used the serum from any diseased lung, and afterwards declared that the so-called inoculated animals were immune.

Now as to tuberculin. If a tubercular cow have injected at short intervals two or three doses of tuberculin, she will in all probability show no rise of temperature after the third injection. The dishonest man will "prepare" his cow for market, and agree, if he gets a higher price, to take her back if she reacts with tuberculin.

What proof can a purchaser have that this has not been done when he buys a cow?

Then again, should a man have a cow in his byre that is looking rather off bloom, what is there to prevent him "fortifying" that cow with a few doses of tuberculin, so that if the Inspector sees her, suspects her, and proceeds to test her for tuberculosis, she will thus be able to pass through the ordeal successfully?

1. I would suggest that the preparation and sale of tuberculin should at once be taken charge of by the Board of Agriculture.

2. That tuberculin should only be sold to recognised inoculators (veterinary surgeons to be specially appointed).

3. That every dose of tuberculin be accounted for, and its results recorded.

4. That each animal inoculated should be branded with a mark durable for at least six months.

SIR HENRY LITTLEJOHN ON THE SPREAD OF CONSUMPTION.

SIR HENRY LITTLEJOHN has presented his report on consumption in Edinburgh to the Health Committee of the corporation.

In dealing with the causes the doctor refers to some of the lower regions of the city, where the poor congregate, as being a menace to the rest of the population. He suggests that all closes and common stairs should be flushed and the streets watered twice a day, and that the water should be drawn from the sea. An important clause in his report refers to expectoration. The time, he says, has arrived when something must be done to lessen spitting in cars, railway carriages, and streets. It is not only disgusting, but, so far as consumption is concerned, is a dangerous practice.

He also points out the importance attaching to the regulation of slaughter-houses and the inspection of dairies and milk supply.

Science will, he adds, in a few years provide infallible tests for detecting tuberculosis, but in the meantime the Government should provide tubercular or other tests of standard purity, and pass a Bill providing for compensation.

MANCHESTER MILK SUPPLY.

At a meeting of the Contagious Diseases (Animals) Committee of the Cheshire County Council, recently a long discussion took place upon the proposed Bills of the Manchester, Salford, Warrington, and Stockport Corporations with regard to their milk supply. It was urged that if the proposals they make are adopted Cheshire dairy stocks would be decimated. A resolution was passed recommending the Parliamentary Committee of the Council to oppose the Bills in Parliament.

NORTHAMPTONSHIRE COUNTY COUNCIL ON RIDICULOUS FINES FOR ADULTERATION.

THE Public Health Committee have had under consideration the question of milk adulteration and the amount of fines imposed on conviction. Being of opinion that the fines in many cases were not in proportion to the gravity of the offence, they had requested their chairman (Mr. Woolston), together with the County Medical Officer of Health and the Inspectors of Food and Drugs, to prepare a return based on actual offences committed in this country during the years 1897 and 1898. The committee recommended that this return be forwarded to the Chairman of Quarter Sessions with a request that it should be considered and, if thought desirable, brought to the notice of each Bench in the county.

The Chairman said that the magistrates, in this matter of fines for adulteration, erred through want of knowledge. It did not occur to them that they inflicted ridiculous fines; they did not calculate the profit of adulteration when multiplied by the number of days in the year. Failing the assistance of the Press, he would do his best to bring the matter before the magistrates of the county. He was sure the magistrates did not wish to inflict ridiculous fines, which were frequently so slight that instead of discouraging they rather encouraged adulteration of food supplies. The Act allowed a £20 fine, and he therefore hoped there would be no more occurrences of fines of £2 or £3. No meaner form of profit-making than selling water at the price of milk could scarcely be conceived. He would be very glad to do all in his power to bring the subject before the notice of the Benches of the county.

TUBERCULOSIS IN CATTLE.

MUTUAL ASSURANCE SCHEME IN LINCOLNSHIRE.

OWING to the Grimsby butchers having sustained serious loss through buying cattle affected by tuberculosis, their association have decided not to purchase any cattle offered for sale in the Grimsby Cattle Market unless guaranteed by the vendors to be free from disease and fit for human food, the guarantee to stand good for seven days after purchase. January 30th being the date upon which this resolution came into operation, and also Grimsby Cattle Market day, a large meeting of Lincolnshire farmers, cattle dealers, auctioneers, and others interested was held at the "Ship" Hotel in the afternoon, under the presidency of Mr. Henry Dudding, the well-known cattle breeder, of Riby.

Mr. Dudding suggested that the farmers and butchers should come to some agreement so that, until the House of Commons took the matter up, they could help each other. He as a farmer was willing to contribute a small sum towards the recovery of the loss of cattle seized through tuberculosis, but the butcher buyer ought to give an equal amount.

Mr. Holmes, president of the Grimsby Butchers' Association, said that the butchers of the town were quite harassed over this, and had been for a long time. He himself thought that if a practical butcher was appointed an inspector there would not be so much meat seized.

Mr. Macauley moved that for two months the farmers should pay 1s. per head of cattle sold at Grimsby, and the butcher buyer also pay 1s., that the money be banked in the names of a farmer, a butcher, and an auctioneer, and that from this fund full compensation be paid when a beast was diseased.

Mr. Dennis seconded the resolution, and it was carried unanimously.

It was then decided that Messrs. G. Jennings (farmer), Relton (butcher), and Riggall (auctioneer) should be the three trustees.

Mr. R. Wood moved that the meeting petition Her Majesty's Government to have tuberculosis scheduled under the Animals Diseases Act, and to allow full compensation for the beasts seized, copies of the resolution to be sent to all the Lincolnshire members of Parliament.

This was carried unanimously.

LARKS AS FOOD.

At this season of the year it is common to see strings of dead skylarks hung up in poulterers' shops. It is common, also, says *The Globe*, to hear remarks upon the cruelty of the practice of killing these sweet songsters for food. The sentiment which inspires these remarks is praiseworthy, and the ignorance which misguides them is pardonable, for it is no business of the man or the woman in the street to acquaint himself or herself with the habits of migratory birds in rural districts. But persons who undertake to write to the papers protesting against the ruthless slaughter of larks ought to acquaint themselves with facts; and one salient fact connected with the skylarks, which descend upon Britain in myriads in winter from the north of Europe when they breed, is that they may become an unmitigated nuisance to the agriculturist. "Could any of your readers," asks a correspondent of *The Field* in despair, "tell me the best way to capture or get rid of skylarks? I have," he continues, "about 250 acres of young clovers and lucernes, which are bitten down to the earth by hundreds of larks. I kill scores with the gun, but it seems a hopeless task to keep them off so much land." And the editor of *The Field* can only reply: "We know of no remedy, as the birds come over in countless thousands." When, therefore, enthusiastic bird-lovers feel inclined to denounce the practice of killing birds in winter for the London market as a cruel method of depopulating our fields of the birds that give sweet music in summer, let them pause and consider that there are such things as British farms laid waste from end to end by these alien skylarks, of which only a fractional percentage ever find their way into the shops.

ADULTERATING ALLSPICE.

MR. F. H. BORRODAILE, State Analyst to the Michigan Pure Food Department, in a report states that the tree which produces allspice is an evergreen, and the only one of the spices that had its origin in the New World. It is a beautiful tree, about thirty feet high, with straight trunk, much branched above and covered with a smooth grey bark. Its dense and evergreen foliage gives it at all times a refreshing appearance. The leaves, which are petiolate, vary in shape and size, but are usually about four inches long, elliptical, entire, blunt or obtusely pointed, veined and of a deep, shining green colour. The tree exhales an aromatic fragrance, especially during the summer months when in flower. It is a native of the West Indies, Mexico, and South America, and is abundant in Jamaica, whence its fruit received the name of Jamaica pepper. At present the greater amount of the allspice supply comes from Jamaica.

The allspice berries are gathered after having attained full size, but while yet green, and are carefully dried in the sun and packed for the market in bags or barrels. The berries are small, dry, and globular, from two to three-tenths of an inch in diameter, are of different sizes, usually the size of a small pea, having a short style and surrounded by four short, thick sepals, which often, how-

ever, have become broken off, leaving a sear-like ring; colour brown or brownish grey, and when cut into disclose two cells, each containing a dark, kidney-shaped seed. The berry has a woody shell of pericarp, easily cut and of a dark, ferruginous brown, rough by means of minute tubercles filled with essential oil. The seed is not nearly so aromatic as the shell or pericarp. The odour is very fragrant, and is said to very closely resemble the odour from a mixture of cinnamon, cloves, and nutmegs, hence the name of allspice, by which they are best known in this country.

Allspice, like all of the other spices, offers in the ground state quite a margin of profit for those who are inclined to mix with the spice foreign substances. The use of powdered or ground clove stems has become quite a favourite with some, others resort to peas, almond shells, etc. A sample before me, which was picked up in Detroit by one of our inspectors, contains a large admixture of cracker crumbs and sufficient ground saunders to disguise the whitish appearance the adulterations would otherwise give to the product. Adulteration seems to be inherent with many producers of food articles. Some people evidently practise the methods of sophistication in order to keep well versed and up with the lawless class, who are constantly studying some new sleight-of-hand by which they can deceive the public. These conscienceless brethren will tell you that their method of treating their particular product really benefits it. After they have cheated the public long enough to be discovered and exposed, they join hands with others of the same stamp and sympathies, and enter the field anew as a combine or syndicate, not to correct or in any way ameliorate their tampering with our foods or beverages, but to join their whole force of experiences and go at it with renewed vigour.

A VEGETARIAN TEST.

AN interesting experiment has just taken place in Berlin (says *Baby*) to test the walking powers of children fed upon an ordinary diet, and of children fed according to vegetarian principles. It may be remembered that a short time ago Professor Baron, a celebrated vegetarian, left a sum of £23,000 to the city of Berlin to found an orphan asylum, upon the condition that the inmates should be fed solely on vegetarian diet. There was much discussion among the city authorities, which number Professor Virchow and Dr. Koch among them, as to whether such vegetarian fads should be encouraged. The Vegetarian Society of Berlin, in order to prove the advantages of a diet composed of vegetables, arranged that a match should take place between Berlin and Potsdam (a distance of about nineteen miles), the competition to be between Berlin school-children between the ages of seven and thirteen, fed upon the ordinary diet, and children of the same age fed upon vegetarian diet. The result of the march was that the former quickly grew tired and fell out, whereas the latter accomplished the march without any difficulty, and arrived in Potsdam in splendid condition. Some of the elder vegetarian children, indeed, begged to be allowed to walk back again to Berlin. Their request was granted, and they arrived in Berlin, having covered the distance of over thirty-eight miles. Upon their return they were taken to the War Office and to the newspaper offices to be exhibited. They were pronounced to be in wonderful condition considering the distance they had walked. The vegetarians of Berlin are very triumphant over their success, but some of their opponents are not convinced yet, for they argue, perhaps with some truth, that the vegetarian children were fed on the very best diet of their kind, whereas most of the other Berlin school children came from poor homes, where they are very indifferently fed.

THE OYSTER AND TYPHOID QUESTION.

PROFESSORS HERDMAN AND BOYER have made investigations into the sanitary condition of oysters. The two

professors, after three years' study, have decided that oysters cannot have typhoid fever. Even if the bacilli of that disease get inside, they not only do not increase but are got rid of in a few days, and they have practically come to the conclusion that sea-water and typhoid do not harmonise. The conclusions of the two professors as communicated to the Royal Society are that shellfish deteriorate in the shops of our cities and towns, and may thus become infectious.

THE COST OF PROTECTING THE PUBLIC FROM ADULTERATION.

ALTHOUGH we hear a good deal about the expenses of the Inspectors appointed under the Foods and Drugs Act, there can be no doubt that so long as they do their duty the money is well invested, says *The Southampton Echo*. It is in the poorer localities that particular care should be taken, because it is only reasonable and right that the poor should get those articles of food they require, no matter how small in quantity, pure and unadulterated. It should be remarked that it is not only the poor class of traders who sell articles under wrong names, or which are not of the quality demanded by the purchaser. For instance, one of the prominent tradesmen of Birkenhead, who holds several public offices, had in his shop labels which announced that "pure butter" was on sale at ninepence and tenpence a pound. Anyone who knows the value of that commodity in the market knows full well that "pure" butter cannot be obtained at such a price. The Inspector bought two pounds, and it was given to him, and there was no label on the packages as required in the case of margarine. But when examined, there was no butter at all in the concoction; it was margarine, pure and simple. In such cases as these the excuse that it was the fault of an assistant is not to be tolerated for a moment. Surely anyone in business would take the precaution against his customers being thus misled, or induced to buy an article very different to what was asked for by the purchaser. The bringing of such cases into Court, and the imposition of heavy penalties, should bring about a diminution of this class of offence.

THE "BRITISH ANALYTICAL CONTROL" GAME.

"ACCORDING to a new publication, which is described as 'the official organ of the International Commission on Adulteration,' traders and the public are to have a new authority set up in their midst, under the euphemistic title of 'The British Analytical Control.' The objects of this new authority," says Mr. A. J. Giles, in *The Grocer*, "are stated to be: 1. 'To protect the health and interests of the public by affording an authoritative and permanent guarantee that the nature, substance, and quality of food and other products are in accordance with the demand and expectation of the purchaser, and by directing attention to these products, which, being under permanent analytical control, may be accepted as free from injurious or doubtful constituents, and as pure, genuine, and good in the strictest sense of these terms. 2. To protect manufacturers and importers against the unfair competition arising from the introduction and sale of imitations and of inferior or adulterated articles. 3. To enable private purchasers and consumers of controlled articles to satisfy themselves, independently and without expense, as to the characters and quality of any samples of such articles offered for sale.' All these objects are in the highest degree satisfactory, but how are they to be attained? According to the published regulations of this new body, by the articles being marked with the stamp of the 'British Analytical Control.' The regulations do not state whether the manufacturers will have to pay for the examination of their goods by this 'Control,' but as this body can hardly be carried on without funds it is to be presumed that the manufacturers will have to pay for the analyses of their goods, especially as 'the manufacturers and vendors of articles which have been placed under the British Analytical Control shall be entitled to state the fact in their advertisements and circulars.' Now, the Institute

of Chemistry in 1892 held it to be 'discreditable to the profession of analytical and consulting chemists to issue or allow to be issued certificates of purity or superiority concerning advertised commodities, such certificates being either not based upon the results of an analysis or containing exaggerated, irrelevant, or merely laudatory expressions designed to serve the purposes of a trade puff.' If such a course is unprofessional in an individual, it is not easy to see how it will be less unprofessional when individuals combine and call themselves by some high-sounding title. There is the further question how this new body will deal with articles other than proprietary, and who is to guarantee the purity of such. The Institute of Chemistry were certainly wise in denouncing 'trade puffs' given by professional men, and it will be interesting to see what its attitude will be towards this new combination."

THE PURE BEER MOVEMENT.

It seems not unlikely that after all its laborious sittings and massing together of scientific evidence nothing will come of the Pure Beer Committee's inquiry. The majority of the committee, it is hinted, favour a continuance of the "Free-mash tun" (says *The Eastern Daily Press*), and seem to fear placing restrictions on the brewer. If that be the case there will certainly be a minority report, as Sir Cuthbert Quilter is not, like the poet Keats who was snuffed out by a review, the sort of man to allow an ambition to be easily crushed. That ambition is that the working-men may know what they are drinking. The first objection in the way of any legislation is a difficulty in the way of detecting impurities; but on that point several of the most eminent analysts professed that they could satisfy a court of law. The second objection was that it was not possible to brew good beer out of malt and hops alone, and that, as a matter of fact, the beer brewed with substitutes is better than the old-fashioned beverage. If that be so, all the brewers would have to meet would be a little prejudice, which time and information should overcome. There is no suggestion that they should be debarred from brewing any liquor they may fancy; all that is asked is either that they should tell the public the ingredients, or, at least, not call it beer, when not composed solely of the elements associated with that name. It will be regrettable if beer cannot in some way be brought within the scope of the Food and Drugs Act.

ADULTERATION IN THE COUNTY OF CHESTER.

MR. J. CARTER BELL, County Analyst, reports:

"During the quarter ending December 31st, 1898, I have analysed 249 samples, consisting of 55 milks, 70 butters, 22 coffees, 8 peppers, 4 gingers, 11 arrowroot, 1 cheese, 19 spirits, 10 condensed milks, 1 jam, 4 oatmeal, 1 port wine, 23 waters, and 20 sewages and effluents.

"Of these 6 were adulterated, namely, 2 butters, 2 spirits, and 2 coffees. The butters were adulterated with 80 per cent. of foreign fat. The coffees contained 50 and 60 per cent. of chicory, and the spirits 2 and 15 per cent. more than the authorised allowance.

"There has not been a single case of mild adulteration this quarter, and only five cases of poor milk, three of these being from the same farm. In my own mind, I had no doubt that these three samples were not genuine milks, for in this case the farmer supplied four samples of milks; one was of good quality, and the other three deficient in fat, but as they came up to a low standard I was obliged to pass them as pure.

"5 Samples of Milk contained over 11 per cent of total solids.

21	"	"	"	12	"	"	"
26	"	"	"	13	"	"	"
3	"	"	"	14	"	"	"

"The ten samples of condensed milk were pure, and agreed with what one would call a standard, that is three

volumes of milk condensed to one, containing from 9 to 10 per cent. of fat.

"The following table gives the analyses of the ten samples:

No.	Total Solids.	Fat.	Ash.	Water.
3296	80.20 ..	9.9 ..	2.07 ..	19.80
3297	75.10 ..	9.9 ..	2.00 ..	24.90
1507	76.25 ..	10.2 ..	2.00 ..	23.75
2315	76.90 ..	9.8 ..	1.65 ..	23.10
2316	78.50 ..	10.3 ..	1.92 ..	21.50
460	78.25 ..	9.7 ..	1.80 ..	21.75
466	75.10 ..	9.9 ..	2.20 ..	24.90
1510 Skim ..	74.50 ..	2.3 ..	1.84 ..	25.50
2317 Separated	77.85 ..	2.1 ..	2.10 ..	22.15
461 Separated	74.75 ..	2.8 ..	2.20 ..	25.25

"The above condensed milks are about equal to average samples, but the skimmed and separated milks contain more than the average fat, for as a rule, they do not contain more than one to one and a half per cent of fat.

"The State Board of Massachusetts have just finished an investigation upon this subject of condensed milks. A copy of the report has been just sent to me by the Secretary.

"It will be to the purpose if I give a few of the samples out of nearly one hundred analyses.

Brand.	Total Solids.	Water.	Cane Sugar.	Milk Sugar.	Proteid.	Fat.	Ash.
Pure Food ...	68.70	32.30	38.43	6.38	10.70	11.46	1.73
Holstein ...	74.12	25.88	40.97	12.47	7.69	10.80	2.25
Rose ...	75.62	24.38	42.81	11.51	8.71	10.80	1.79
Hampden ...	73.35	26.65	42.42	10.50	8.26	10.50	1.67
Magnolia ...	73.62	26.38	45.05	10.80	5.55	10.80	1.42
Defiance ...	73.65	26.35	40.21	14.20	7.79	9.90	1.55
Maine ...	71.27	28.73	30.73	11.55	8.59	9.90	1.50
Challenge ...	73.25	26.73	42.82	13.40	5.61	9.90	1.53
Gold Medal ...	74.90	25.10	42.27	9.57	11.51	9.90	1.65
Clover ...	71.84	28.16	37.22	14.73	8.62	9.54	1.73
Sweet Clover ...	73.15	26.85	48.36	7.78	6.51	9.00	1.50
Knight ...	77.43	22.57	44.00	12.64	9.85	9.00	1.94
Pansy ...	77.00	23.00	45.00	11.61	9.51	9.00	1.82
Daisy ...	73.90	26.10	43.30	9.57	9.24	8.40	1.64
Rival ...	74.87	25.12	45.95	9.85	9.57	8.10	1.40
Crescent ...	72.11	27.89	43.48	11.28	7.70	7.92	1.73
Baby ...	69.30	30.50	39.29	11.60	8.44	7.80	2.37

CORRESPONDENCE.

VINEGAR SWINDLES.

To the Editor of FOOD AND SANITATION.

SIR,—The two articles which appear in your issue of 28th inst., the one headed "The Purity of Ginger—Public Analysts Criticised at Barnsley," and the other "Vinegar Swindles," disclose such a state of affairs as to lead us to conclude that if there is no remedy for them the Food and Drugs Act will soon become inoperative. We supposed the chief object of this Act was to protect consumers against spurious and inferior articles, but if inspectors appointed by Health Committees are to deal with samples as recorded in your publication, and so-called public analysts decline to accept for analysis samples offered them, then dishonest trading will be carried on with impunity, and not only will consumers suffer, but also those who conduct their business upon honourable lines. If vendors of spurious vinegar are not to be dealt with under the Food and Drugs Act, lest by so doing they should be worried, why is not the same consideration extended to sellers of margarine and diluted milk and spirits, etc., or is it a greater offence in the eye of the law to sell one spurious article rather than another?

We trust the new Bill which is to be introduced this session by Mr. Walter Long may bring about a much needed alteration in the way of dealing with adulterated goods, and with all those who have to do with them.—Yours very respectfully,

ALFRED A. FARDON,

Pp. Fardon's Vinegar Co., Ltd.

Brewery, Glover Street, Birmingham.

January 31st, 1899.

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OR

LIEBIG'S EXTRACT OF MEAT & MALT WINE

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Food and Sanitation.

SATURDAY, FEBRUARY 18TH, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

All communications for the Editor of "Food and Sanitation" must be addressed to

4, AVE MARIA LANE,
LONDON, E.C.

THE PRECISE VALUE OF A SOMERSET HOUSE REPORT.

OUR contention that a Somerset House Report is only an opinion and a wretchedly ignorant one at that, has within the past few days met with the support, in so far as its being only an opinion, of the judges of the Queen's Bench Division. In another column we give the result of the Caper Tea appeal and would draw particular attention to the remarks of Mr. Justice Channell. It is true that this particular Somerset House opinion was given in another

but similar case, yet this is the first occasion on which there has been a distinct pronouncement from the High Court that Somerset House opinions, reports, or analyses should not be treated by magistrates as evidence. The present Food and Drugs Acts, read sensibly, do not give to a Somerset House analysis any such power. It is merely an opinion, which magistrates may treat with contempt if they choose, and in ninety-nine cases out of a hundred they would treat it with contempt if they knew the capacity of the beer and gin testers who presume to give analyses of foods. They have neither the training nor the practice requisite for food analyses, and the few samples they analyse yearly only serve to expose their glaring incapacity.

THE GOVERNMENT'S NEW ADULTERATION BILL.

If the London correspondent of the *Manchester Guardian* is to be believed, and he is usually well informed of the inside workings of the political machine, those who demand a real adulteration act will be once more sold. He says:

"It is probable there will be disappointment amongst retail traders and those engaged in the detection and in the suppression of the adulteration of foodstuffs when the terms of the Government bill to amend the Food Adulteration Acts, promised in the Queen's Speech, come to be publicly known. The bill of last session, introduced by Mr. Chaplin at the far-end of the year, was regarded as utterly inadequate as an expression of the views of the Select Committee of the House of Commons, and if it had proceeded to a second reading would undoubtedly have been very severely criticised. It may seem strange, but this mistake is about to be repeated, and the bill that will presently be introduced will be as restricted in its scope as that of last session. It will be, in fact, a bill for the prevention of adulteration of merely agricultural products, and the greater adulteration question will be left quite untouched. The scope of the bill has become known to a few of those interested in the question in the House, but the way is barred, of course, to an amendment to the Address on the question, so that the dissatisfaction which is certain to be expressed will have to find vent in amendments on the second reading of the bill and in Committee. Strong efforts will then be made to extend its provisions to some of the more important questions touched upon by the Select Committee, especially the erection of a court of reference and the creation of standards of purity in various foodstuffs."

The *Newcastle Leader* thus comments on Mr. Chaplin and his Bill:

"The mistakes of last year are to be repeated in the Bill which is promised in the Queen's Speech, it seems. Those members of the House of Commons who have interested themselves in the subject have discovered that the promised measure is crippled by the very restrictions which were so mercilessly criticised in its predecessor. The Bill, in fact, will merely attempt to prevent the adulteration of purely agricultural products. No effort has been made to touch even the fringe of the larger and much more important matter of the adulteration of foodstuffs which are not produced by the farmer, and which, as the report of the Select Committee very clearly showed, are much more likely to lend themselves to the manipulations of unscrupulous retailers. The honest merchant, as well as those engaged in the difficult work of detecting and suppressing this adulteration, will, no doubt, be greatly disappointed when the terms of the promised Bill become known. Especially keen will be their disapprobation when they find that even the most important recommendations of the Select Committee have been ignored. The Committee reported strongly in favour of the appointment of a Court of Reference and the creation of standards of purity in the principal foodstuffs. All this has been forgotten, however. Indeed, Mr. Chaplin seems to have made no attempt at following the lines of the Committee's report, and it really seems as though his Bill had been expressly designed for the purpose of meeting the fate which overtook its predecessor."

The only thing Mr. Chaplin and Mr. Long take any serious interest in is the regular drawing of spoil in the shape of salaries they do not earn. A real adulteration act is as much above their intelligence as it is above their wishes.

SPIRITS AND THE NOTICE DODGE.

A CORRESPONDENT writes :

"I should like to draw your attention to a few recent prosecutions for selling spirits adulterated beyond the limit allowed. The defence in each case relied upon a notice exhibited on the premises to the effect that 'All spirits sold are reduced, and no alcoholic strength is guaranteed,' or some such similar notice. Out of seven cases which I can recall during the last three or four months fines were inflicted in four cases, the Bench saying in one instance that the 'notice' was not in its place. One was dismissed on payment of costs, the Bench saying that in the future a more conspicuous notice should be exhibited. Another case was dismissed, the Bench remarking that they deemed it proper that the circumstances should have been brought before them; and another was withdrawn on payment of the costs on the advice of the magistrate.

"What use is Section 6 of the Food and Drugs Amendment Act if this 'notice' game is to become general?

"I should be glad of your views on this subject.—Yours, etc.,

"UNDER PROOF."

Our correspondent directs attention to a fraud which is as thieving an evasion of the Adulteration Acts as any now practiced. Several of our subscribers have secured its suppression by causing police objection to be made to the renewal of the licenses of places which thus fraudulently evade the law, and in many cases an undertaking to discontinue the fraud has been required before the renewal has been granted. Such action ought to be general throughout the kingdom.

WHAT IS VINEGAR ?

IMPORTANT PROSECUTION IN BRISTOL.

At Bristol police court on February 8th before his Honour Judge Austin and Messrs Arthur Baker and Albert Fry, John Briffitt, of 20, Broad Weir, was charged on the information of Frederick J. Simpson, inspector under the Food and Drugs Act, that he on the 3rd of January sold a pint of vinegar which was not vinegar as demanded, but contained 99'38 dilute acetic acid, and '62 colouring matter. Mr. H. R. Wansbrough prosecuted, and Mr. Vachell (instructed by Mr. Mosely) appeared for the defendant.

Mr. Wansbrough said that was a case which was considered to be of importance, and Mr. Simpson, the inspector, had instructions to bring the matter before them for this reason. There had been three or four convictions in that Court for selling distilled wood vinegar or dilute acetic acid as vinegar. But on the last occasion the case was dismissed, and therefore it was deemed advisable to see what the authorities should do, as it was unfair that one tradesman should do with impunity what another was fined for doing. The defendant kept a shop, and on January 3rd, at 5 p.m., Mrs. Holt, having instructions from the inspector, went to the defendant's shop and asked for a pint of vinegar. She had with her a jug which she handed to the defendant, and he went to a cask which was behind him in the shop, and the side of which was turned towards Mrs. Holt. He drew that for which he was now summoned for supplying as vinegar. She paid three half-pence for the pint, which was the price of the best vinegar. There could not be any question that the distilled wood vinegar was produced at a very much less price than the ordinary fermented vinegar, as he suggested the vinegar of commerce. She saw no label upon the cask. Mr. Simpson then came in, and the jug was handed to him. He told the defendant who he was, and why the vinegar was bought. He offered to divide what was purchased into three parts, and the defendant then said it was distilled wood vinegar,

and referred to the label on the cask. Mr. Simpson then tried to see the label, and whether from the position in which he and Mrs. Holt were standing on the public side of the counter they could see the label. He found they could not do so, and he pointed this out to the defendant. If there was a label on the cask which had been seen by the purchaser and the purchaser saw the contents of the cask were described as distilled wood vinegar, there would be no offence, as neither could say they were prejudiced; but beyond all doubt they would find such label as might have been on the cask was not visible or would not be visible by people who were standing on the public side of the counter. The real question for the bench to determine was whether when a person asked for vinegar he could be supplied with dilute acetic acid or what had of late been called distilled wood vinegar. His contention would be that although the word "vinegar" might possibly be used in relation to that article, commercially it could only be used with qualifying words attached to it. For instance, if a person asked for beer he could not be supplied with "New Era beer" or "hop beer."

Judge Austin: If anyone asked for wine he would not be prejudiced if he was supplied with port wine.

Mr. Wansbrough: But if he was supplied with wine and water or ginger wine he would be prejudiced. He contended that ordinary vinegar must be produced by fermentation, and fermentation produced certain qualities, without which the article was not vinegar at all. That stuff was produced by the destructive distillation of wood, and properties which should be found in true vinegar were absent, viz., alcohol, and alcoholic derivatives. He then gave the definition of vinegar, which appeared in the Imperial Dictionary, 1883 edition, as well as the definition of wood vinegar, which was described as impure acetic acid obtained by distillation of wood. He then quoted from Dr. Thorpe's Dictionary of Applied Chemistry, and said under the head of acetic acid they found reference to a preparation of vinegar. The edition was 1894, and the writer thought that vinegar should be produced by fermentation, which, remarked Mr. Wansbrough, was one of the chief points in the case for the prosecution, and Dr. Thorpe pointed out the difference between true vinegar and artificial vinegar.

Judge Austin asked if that was not an expression of opinion on that gentleman's part?

Mr. Wansbrough: Certainly not, if he uses the word "artificial."

Judge Austin: One vinegar is as artificial as another: whether you make it by fermentation or distillation, it is artificial.

In answer to Mr. A. Baker, Mr. Wansbrough said if both kinds produced the same result he agreed it did not matter which was supplied; but they did not produce the same effect, otherwise margarine could be sold as butter. The difference between distilled wood vinegar and ordinary fermented vinegar was greater than the difference between margarine and butter.

Mr. A. Fry: But butter is, as everyone knows, made from milk, and margarine is altogether different.

Judge Austin: There used to be a superstition that beer was made with malt and hops, though everyone knows that beer is not now made with these, but with sugar, quassia, and other ingredients.

Mr. Wansbrough: But that is done under an Act of Parliament.

Judge Austin: But if it came to be commercially known as beer, it is not sold to the prejudice of the purchaser.

Mr. Wansbrough next quoted from the British Pharmacopœia, edited by Professor Atfield, and said he purposely did not quote from the latest edition, as there had been a case in Birmingham, and Professor Atfield gave evidence diametrically opposed to what he had said in this edition of the British Pharmacopœia, of which he was editor. There was an appeal, and the Recorder upheld the conviction which had taken place, and in the next edition of the book there was silence as to what vinegar was com-

posed of; no doubt the editor, after what he said in court, thought he had better leave the matter alone,

Judge Austin: I suppose it was a matter of fact; you cannot tinker it into a question of law.

Mr. Vachell: That is the trouble. My friend has not an appeal. My friend should have said in reference to the Pharmacopœia that the strong reason why vinegar is absent from the present edition is because of the parliamentary report on food and drugs.

Mr. Wansbrough remarked that it was a fallacy to say that if a person asked for vinegar he meant vinegar from malt only; it was meant from the liquids which contained alcohol.

Judge Austin: You say it is simply aciduous fermentation, and cannot be produced by distillation?

Mr. Wansbrough: That is my point. In districts where well-to-do people live this vinegar is not sold, but in poor districts, and the people trusted to the person who sold it.

Evidence was then taken, and Mrs. Holt and Inspector Simpson corroborated the opening remarks of Mr. Wansbrough.

Mr. F. W. Stoddart (public analyst) was then called. He said it was not possible to produce true vinegar by distillation.

Cross-examined: Is there any Act of Parliament that vinegar should not be produced by distillation, but by fermentation?—Vinegar has been made by fermentation for many years.

Is it not a fact that wood vinegar is largely used by many pickle makers as a fine preservative and condiment?—Yes; it would be an equally good preservative without the colouring matter. It is known in the trade as wood vinegar.

Mr. Otto Hehner, consulting chemist and public analyst, of 111, Billiter Square, London, stated that he was analyst for Nottinghamshire, West Sussex, Isle of Wight, and the borough of Derby. He agreed with Mr. Stoddart that vinegar was sold by specific appellation, and must be produced by fermentation. Vinegar was as much a mixture as wine, and as little as alcohol was the only constituent of wine, so little was acetic acid the only constituent of vinegar.

By the Bench: He did not think manufacturers of malt vinegar suffered much from the sale of wood vinegar, as the distillation of wood vinegar was a small proportion of a large industry.

Mr. Wansbrough: At law, I maintain, a person is prejudiced whether distilled vinegar is as good or better than malt vinegar, if he does not get what he wants, and what he asks for.

Cross-examined: Wood vinegar had been called vinegar by way of courtesy for many years. (Laughter.)

Re-examined: It should be sold as wood vinegar. He gave evidence in the Birmingham case, where the question was thrashed out and a conviction followed.

Mr. Vachell: That has nothing to do with this court, and since then the report of the Parliamentary Committee has come out.

This completed the case for the prosecution.

Mr. Vachell then addressed the magistrates on behalf of the defendant, and contended that it would be unjust to convict him for selling what witnesses for the prosecution had said was during the greater part of this century known as distilled wood vinegar, and was a commercial article. There appeared to be an entire absence of any standard of what vinegar should be, and he could not discern any difference between fermentation and distillation, which would be to the prejudice of the purchaser.

Judge Austin asked if he would contend that it was of the nature, substance, and quality asked for.

Mr. Vachell said it was a case where there should be no contention. If it was necessary for the law to be altered, let them alter it, but why should there be an arrangement between public analysts on the point? They said that in some way or other people bought to

their prejudice in having that distilled stuff. He then called

Dr. E. H. Cook, analytical and consulting chemist, who stated that he was familiar with distilled wood vinegar. It was in his opinion vinegar, and there was nothing injurious in it.

No other witness was called for the defence.

Judge Austin, in giving the decision of the bench, said the summons must be dismissed, and he would say why. That was a prosecution under Section 6 of the Sale of Food Act, 1875, and the allegation was that the defendant, to the prejudice of the purchaser, sold an article of food which was not of the nature, substance, and quality of the article demanded by the purchaser. What was demanded was a pint of vinegar, and that which was supplied was a pint of something known as wood vinegar, and commercially known as vinegar, and bearing the name of vinegar, as a product of the distillation of wood, according to the evidence of the past sixty or seventy years. In the opinion of the magistrates the long discussion which had taken place in regard to the minute differences or considerable differences between fermented vinegar and wood vinegar was very little to the point. If a thing which was sold to that particular purchaser was something which could possibly be called vinegar, and if it was something which had been commercially known by the name of vinegar, there seemed to them that no offence had been committed against the statute. The varieties of vinegar were several; they might have malt vinegar, which was in truth made from malt by aciduous fermentation; they might have vinegar made from alcohol, they might have cider vinegar, date vinegar, and wine vinegar, the last-named, of course, the original vinegar as dealt with under the name. It seemed to them that the purchaser who sought to protect himself should ask for that particular species of vinegar which he desired, and if he asked for vinegar pure and simple, it was not an offence against the Act if he was served with something commercially known as vinegar, even though cider or date vinegar, or distilled wood vinegar. In the opinion of the Bench, that consideration of the matter disposed of the case, and they were of opinion that there had been no offence under the section of the Act under which the prosecution was brought.

Mr. Vachell applied for costs, and said that the authority reopened the matter, as the last case brought before the Bench had been dismissed.

Mr. Wansbrough submitted that as it was an inquiry for the purpose of setting at rest conflicting decisions by the Bench, it was not a case in which one party should pay the costs of the other.

Judge Austin: That is the very reason why they should.

Mr. Wansbrough: The Bench have decided sometimes one way, and sometimes the other, and therefore it was desirable there should be a decision that might be final.

The magistrates agreed to allow the defendant five guineas as costs.

Mr. Wansbrough said in view of the possibility of the authority going to the court above, did he understand the Bench to say that they had evidence that this stuff had been known commercially as vinegar or wood vinegar, as there had been no evidence on either side to arrive at it being known as vinegar.

The Clerk (Mr. Braithwaite): There is custom.

Judge Austin: We think wood vinegar is commercially known as a species of vinegar. You can take that down and make it a case of appeal if you can.

Mr. Wansbrough: I am satisfied with that.

CURIOUS CASE UNDER THE MARGARINE ACT.

At the South-West London Police-court, on Feb. 8th, Evan Williams, a grocer, carrying on business at 27, Gideon Road, Battersea, answered to a summons, before Mr. Francis, at the instance of the vestry of St. Mary, Battersea, for exposing for sale by retail margarine without the same being labelled "margarine," as required by the statute.

Mr. W. W. Young represented the vestry, and Mr. George Bell was for the defendant.

The defendant was summoned in December last by the same vestry for selling butter adulterated, it was alleged, to the extent of 95 per cent. of margarine, but on that occasion Mr. Bell, who defended, took a preliminary objection because the summons had not been issued within the twenty-eight days as prescribed by Act of Parliament in cases where perishable articles were concerned. Mr. Plowden, before whom the summons was brought, being of opinion that butter was a perishable article, held the objection to be a valid one, and dismissed the summons with costs against the vestry. The present prosecution was in respect to the same adulterated article, the only difference being that the summons had been issued under the Margarine Act, whereas the first was issued under the Food and Drugs Act.

Mr. Young, in referring to the decision arrived at by Mr. Plowden, said his worship was altogether wrong in dismissing the summons because he had to decide a question of fact—whether butter was or was not a perishable article—and this question could not be determined without evidence. He (Mr. Young) proceeded to argue that margarine was not a perishable article.

Mr. Bell: We were summoned for selling butter, not margarine.

Mr. Francis: Is your defence *res judicata*?

Mr. Bell: That is so.

Mr. Young: The learned magistrate, Mr. Plowden, did not adjudicate upon the case; he declined jurisdiction as a matter of fact.

Mr. Bell: Your proper procedure was to go to the Court of Queen's Bench for a mandamus rather than ask his worship to sit in judgment on his colleague, Mr. Plowden.

Mr. Young disclaimed any such intention, and

Mr. Bell retorted, "Whichever way it is argued it is the same thing." Proceeding with his remarks, he said the summons was heard to all practical purposes, and asked if it was attempted to be suggested that an experienced magistrate like Mr. Plowden would put a case out of court without full justice being given.

Mr. Francis: He dismissed it on a preliminary objection.

Mr. Bell: After the opening statement of Mr. Young, who mentioned what he was prepared to prove. After the summons was dismissed, Mr. Young applied for a case for the consideration of the Court above, but the magistrate refused it, observing that the butter would speak for itself. If Mr. Young was dissatisfied he should have applied for a mandamus. This, I apprehend, would have been the proper course, to summon the man again for what is after all the same offence is manifestly unfair and contrary to all precedent. Any fine the Court would impose is a secondary consideration. It is a matter of great importance to the public at large that the criminal law should not be extended to meet prosecutions of this character. The vestry wished to hide the blunder into which they had fallen, and determined by hook or by crook, and apart from all practice and principles, to secure a conviction and make the defendant a scapegoat.

Mr. Young wished to say that he had not made any disrespectful allusions to Mr. Plowden.

Mr. Bell (angrily): You have made allegations.

Mr. Francis exonerated Mr. Young from any such suggestion.

Mr. Bell said Mr. Young would not have dared to come before Mr. Plowden, and in a dilemma sought the aid of Mr. Francis. He (Mr. Bell) invited his worship to discuss the matter with Mr. Plowden before coming to a decision, adding that if the vestry were within their rights to bring a man to the court twice for the same offence, they could do so a dozen times. It was grossly unfair to prosecute a man like this.

Mr. Young: He has not been wronged; the wrong has been done to the public.

Mr. Francis decided to hear the case, as he believed the

first summons was not dealt with on its merits. The Vestry, he said, had a double-barrelled remedy, and they had taken advantage of it.

Mr. Bell protested, and described the proceedings as "tricky."

Mr. Young, in opening the case, said the margarine was not wrapped in a proper wrapper, but in a page of the *Truth* newspaper. This was rather ironical, because the wrapper did not contain the "truth."

This summons failed also because the witnesses Mr. Young called were unable to say that the margarine was exposed for sale.

Mr. Francis said he had no other alternative but to dismiss the case, and on the application of Mr. Bell allowed £2 2s. costs.

MARGARINE AS BUTTER.

At Marlborough Street, on February 13th, A. E. Hall, of 40, Warren Street, St. Pancras, was summoned by Mr. Malcolm Price, Sanitary Inspector to the St. Pancras Vestry, for selling butter adulterated with 85 per cent. of foreign fat, and with not having the margarine in his shop properly labelled—Mr. Ricketts prosecuted.—The defendant said that he lived at Highgate, and sent the margarine to be sold as such by his manager. He did not know what took place in the shop at Warren Street.—Mr. Kennedy fined him 80s. with 14s. 6d. costs.—Mrs. A. N. Connor, of 118, Cleveland Street, St. Pancras, was similarly summoned with respect to butter adulterated to the extent of 65 per cent. of added fat.—Mr. Freke Palmer, for the defence, elicited that the shop was a very small one, and the trade in butter very small indeed, and produced invoices showing that the article was purchased as pure butter.—Mr. Kennedy said the Act was for the protection of the purchaser, and Mrs. Connor must be fined on the two summonses, together 30s., with 14s. 6d. costs, but he should think she had a civil remedy against the seller.

At the Mansion House, London, on February 13th, George Outten, of 38, Mansel Street, was summoned by the Corporation for an infringement of the Margarine Act, 1887, in exposing margarine for sale by retail to which a printed label with the word "Margarine" was not attached, and in selling margarine without a printed wrapper with the word "Margarine" on it.—The defendant pleaded guilty.—Mr. Vickery prosecuted, and said the defendant kept a small general provision shop in a very poor neighbourhood. A visit was paid to his place by the Corporation inspector, who was served with margarine in a wrapper on which the defendant wrote in ink the word "Margarine." The defendant said his trade was very small, and, in fact, he only kept the margarine for his children's own use. He received an excellent character.—Sir Joseph Savory, M.P., fined the defendant 5s. and 2s. costs on each summons, 14s. in all, which he paid.

At Worship Street, London, on February 9th, Ernest Roberts, of Bethnal Green Road, trading as Owen Brothers, provision dealers, having shops in many parts of the metropolis, was summoned under the Margarine Acts for exposing the article without the same being labelled.—He pleaded Guilty, and Mr. Horace Avory, barrister for the prosecution, said there were three previous convictions against the defendant. In May last he was fined £3 and costs, in November £10, and in December £10, all for selling margarine as butter.—Mr. Cluer again imposed a fine of £10, and allowed £3 3s. costs.

At Marylebone, on February 10th, Mr. Curtis Bennett had another batch of summonses before him for offences under the Sales of Food and Drugs Act and the Margarine Act.—In three cases butter had been asked for by a purchaser, and an article was supplied which, on an analysis, turned out to be adulterated with foreign fat, varying in degree from 70 to 85 per cent. In neither instance were the provisions of the Margarine Act complied with.—J. Jenkins, of 102, Drummond Street; Eliza Griffiths, of 105, Euston Street; and Henry Charles Rouch, of 130, Fortress

Road, were each ordered to pay five guineas fines, and 14s. 6d. costs.

At Marlborough Street, London, on February 10th, John Price, a provision dealer, of 91, Cleveland Street, Marylebone, was summoned, before Mr. Fenwick, for selling butter adulterated with foreign fat to the extent of 87 per cent., contrary to the provisions of the Food and Drugs Acts; he was further summoned for selling margarine by retail without handing with it the necessary printed label.—Mr. Ricketts, solicitor, prosecuted on behalf of the Butter Association.—The defence was that a mistake had been made in the absence of the defendant.—Mr. Fenwick ordered the defendant to pay £15 and one guinea costs.—James Birch, trading as D. F. S. Whyte and Co., at No. 1, Upper Marylebone Street, W., was summoned for selling butter adulterated with foreign fat to the extent of 75 per cent.—A fine of £10, with 12s. 6d. costs, was imposed.—Frank Marsh, of 45, Tottenham Court Road, W., was summoned for selling butter adulterated to the extent of 70 per cent. with foreign fat, and fined £15, with £1 2s. 6d. costs.—Frederick Webb, trading as Webb and Co., at 69, Great Titchfield Street, W., was summoned for selling butter adulterated with foreign fat to the extent of 67 per cent.—A fine of £15, with 12s. 6d. costs, was inflicted.

COFFEE.

At Bilston, on February 7th, John Leek, grocer, of Swan Bank, Bilston, was charged at the instance of Mr. Van Tromp (food and drugs inspector) with selling coffee not of the nature and substance demanded by the purchaser.—The evidence showed that several purchases were made from the shop of the defendant on the 31st December, and among the articles asked for was $\frac{1}{4}$ lb. coffee, an analysis of which showed that it contained 46 per cent. of chicory.—Mr. Pratt, for the defence, said the defendant lived in North Staffordshire, owned a large number of shops in different towns, and had no personal knowledge of the transaction. The assistant who served the purchaser had since been dismissed.—The Stipendary characterised it as a very bad case, and fined defendant £5 and costs.

PROSECUTIONS FOR DRUG ADULTERATION AT SKIPTON.

JOHN PHILIP, grocer, of Embsay, was proceeded against by Mr. A. Randerson, Food and Drugs Inspector, Skipton, for selling adulterated camphorated oil. Mr. G. M. Robinson, solicitor, Skipton, defended. The Inspector pointed out that before 1889 no standard of strength had been laid down for camphorated oil. In 1897 notice was given to the wholesale dealers through the *Chemist and Druggist* that a standard would be fixed.—Mr. Robinson objected on the ground that there was no proof the notice had been given.—Mr. Randerson said he could prove that the notice was given through the *Chemist and Druggist* to wholesale dealers, amongst whom would be the firm Mr. Robinson represented.—Mr. Randerson, continuing his statement, quoted from the new edition of the British Pharmacopœia, showing when it was published.—Mr. Robinson said that proved nothing beyond when the preface was written.—Mr. Randerson said the books were in the market in April, the preface being dated in February. Having been sworn, the Inspector now stated that on the 2nd ult. he visited the defendant's shop at Embsay, and purchased three bottles of camphorated oil. After paying for the samples, he explained his reason for buying them, and offered to divide them, but defendant refused. Witness in due course sent the sample to the public analyst, who certified that the sample contained 14.2 per cent. of camphor and 85.8 per cent. of olive oil. The British Pharmacopœia directed that 21 per cent. of camphor be used in the preparation. The analyst further observed that as camphor is the active ingredient of camphorated oil, a preparation containing only two-thirds of the normal proportion of

camphor would be less active, remedially, than a preparation of full strength.—Cross-examined: He took a sample of nitre at the same time, the sample being divided in accordance with the Act. He asked for three ounces, and was told that they only kept it in penny bottles. Defendant was not there at the time, but when he offered to divide it the defendant had entered the shop. He took the whole of the bottles with him because the defendant would not have them divided. He did not say, "I have no need to divide them, as the bottles are sealed." Defendant made that remark, and added that they were sold in the same state as he received them. His assistant was present when he offered to divide them.—Questioned as to the authority of the British Pharmacopœia, the inspector quoted the Medical Act of 1858, section 54, which stated "a general council shall cause to be published under their direction a book containing a list of medicines and compounds, and the manner of preparing them, together with the true weights and measures by which they are to be prepared and mixed, and containing such other matter and things relating thereto as the general council shall think fit to call the British Pharmacopœia, and the general council shall cause to be entered, amended, and republished such Pharmacopœia as often as they shall deem it necessary.—Mr. Robinson suggested that it was merely a recommendation.—The Inspector said the matter had been decided in a higher court, and quoted the case of *White v. Bywater*, where a chemist had been convicted for selling tincture of opium deficient in strength as compared with that prepared according to the British Pharmacopœia.—Mr. Robinson asked whether he could consider the offence a very serious one if it was proved that the article was manufactured before the Act came into force? Did he suggest that a chemist must go over the whole of his stock after the issue of a new Pharmacopœia and test every article?—The Inspector pointed out that several months had been given in which to clear out the old stock. The wholesale dealers ought to call in their stock, and not get the small trader into trouble.—Mr. Robinson said after the wholesale dealers had sold it, and been paid for it, the matter was out of their hands.—The Chairman: They must throw it away.—The Rev. L. B. Morris thought they could not continue to sell anything which was not legal.—Mr. Robinson said their worshipers were pleased to fine several people the previous year for not having saffron in rhubarb. According to this year's issue of the Pharmacopœia, saffron was not required in rhubarb. Would not it be a hardship if the country trader was bound to go through his stock and see that it compared with the Pharmacopœia?—Mr. Illingworth: It is not a question of hardship, but legality.—Joseph Smith, assistant to the Inspector, spoke to being present when an offer was made to divide the samples.—Mr. Robinson said that his instructions were not in accordance with the evidence of the inspector, and the question the magistrates would have to decide was whether the offer to divide the samples was made. His client had a distinct recollection of what took place. He said distinctly that no offer was made. The Inspector was continually going about the country taking samples, and it was quite possible that he was mistaken as to the offer, whereas, with the defendant, it was a matter occurring but once in a lifetime. The Act said that the purchaser shall offer to divide the sample. If they believed his client's evidence then there was an end to the matter. Before the present issue of the British Pharmacopœia, manufacturers were not bound to make the oil of any specific proportions. The drug for which the prosecution had been taken was purchased from a grocer in Skipton, and he had kept it in stock for some time, but there was nothing to tell him that he was wrong. The Pharmacopœia was for the manufacturers and not the small village grocer. The preparation sold was better as a commercial article for outward application than the preparation mentioned in the British Pharmacopœia. Under the circumstances he asked the magistrates to deal leniently with the defendant, seeing that it was the first case of its kind.—The Inspector said that he received instructions when the new British Pharmacopœia was issued not to take any proceedings

until 1899, and thus give traders an opportunity of getting rid of their stock.—Mr. Robinson complained that the Inspector should have started in a village on the first day. He might have commenced in the town.—Rev. L. B. Morris: Small villages are the places where the refuse is sent to (laughter).—Mr. Robinson: Well, it came from Skipton.—John Phillips, the defendant, having been sworn, stated that the Inspector offered to divide the nitre; but said, with regard to the camphorated oil: "I have no need to ask you to divide this, as the bottles are sealed."—Mrs. Phillips, wife of the defendant, gave similar evidence. A fine of 5s., and £1 1s. 3d. costs, was imposed.

WEAK SPIRITS OF NITRE.

Messrs. W. A. and J. Simpson, grocers, Embsay, were summoned for selling adulterated spirits of nitre.—Mr. A. Randerson prosecuted, and called Joseph Smith, who gave evidence as to making the purchase from defendant's shop. The analyst's certificate showed the nitre was constituted as follows:—Nitrous ether, 0.26 per cent.; alcohol and legitimate water, 93.54 per cent.; excess of water, 6.20 per cent. The analyst remarked that the sample contained 6.2 per cent. of water, and 1.7th of the minimum proportion of nitrous ether allowed by the British Pharmacopœia—One of the defendants appeared and said the only explanation he could offer was that the nitre had become weaker through the bottle being constantly opened—Mr. Randerson said he did not suggest that water had been added, it was no doubt due to weak spirit when the nitre was made—A fine of 5s. and £1 2s. costs was imposed.

THE CAPER TEA APPEAL.

IMPORTANT PRONOUNCEMENT *re* SOMERSET HOUSE REPORTS.

IN the Queen's Bench Division, on February 7th, before Mr. Justice Lawrence and Mr. Justice Channell, the case of Shortt v. Robinson came on for hearing.

This was a case stated by justices of Derbyshire, sitting at Chesterfield, at the hearing of an information against Mark Robinson for selling caper tea adulterated with 3.5 per cent. of mineral matter, consisting of sand, small stones, etc.

Mr. J. H. Etherington Smith appeared for the appellant, the Inspector; Mr. Appleton for the respondent, the seller of the tea.

The information, taken out under the Sale of Food and Drugs Act, 1875, was heard on October 22nd. These facts were proved. William Marples deposed to purchasing the tea at the shop of the respondent on behalf of the appellant, W. A. Shortt, the inspector of weights and measures for the northern division of the county of Derby. The tea was divided into three parts for the purpose of analysis. The result of the analysis was that it contained 3.5 per cent. of foreign ingredients. At the hearing the county analyst was called, and swore to the above. In the course of his cross-examination he was asked whether he had seen in the *Grocer* newspaper a case heard at the Manchester Police Court on August 16th, in which a Somerset House report showed that extraneous matter was necessarily present in caper tea. The analyst admitted that he had seen the report of the case in a paper, not the *Grocer*. The appellant's solicitor objected to this as evidence. The justices allowed the question, though they held that the report was not evidence. The report in the *Grocer*, however, was attached to the case. The analyst, in cross-examination, stated that, in the course of 65 analyses of caper tea, he had found the amount of sand and stones to be not so much as 1 per cent., and that only six specimens contained as much as 3 per cent. It was contended for the appellant that an adulteration of 3.5 per cent. having been proved, there must be a conviction. The justices found that the purchaser asked for caper tea, and that such tea was well known as one manufactured for the purpose of using in small quantities by way of addition

to ordinary tea for flavouring it. The justices also found that it was well known that caper, like ordinary tea, was grown under conditions which afforded unusual chances of the introduction of sand and small stones, the tea being grown on friable, sandy soils, and it being a condition of successful growth that rain should be not only very frequent, but copious. They considered that, having regard to these facts, they were not justified in convicting the defendant on so small a percentage as 3.5 of extraneous matter of a nature peculiarly incident to the growth of the article. Moreover, it appeared from the evidence of the analyst himself that there were necessarily some percentage in caper tea of the extraneous matter complained of. They accordingly dismissed the information. The question for the opinion of the Court was whether the justices were justified in considering, on the facts before them, that a presence of extraneous matter to the extent of 3.5 per cent. did not necessarily constitute an adulteration.

Mr. Smith contended that the justices were wrong. They had evidently acted on the report of the Somerset House authorities set out in the case heard in Manchester. That was not evidence in the case before them. The analyst might have been asked his opinion of the report. If he had affirmed it, then there might have been something for the justices to act on. He was not asked for that, however. His analysis uncontradicted was sufficient to show adulteration under section 24. He cited, "Dargie v. Dunbar" (21 Scottish Law Reports, 536), "Reg. v. Field and others, Justices of Hampshire" (64 L.J. M.C., 158). In the Manchester case the defendant gave evidence that the tea when sold was in the same condition as when it was brought out of bond. Section 30 provided for there being an analysis of tea in bond. There was no such evidence in this case.

The court dismissed the appeal.

Mr. Justice Lawrance said that, in his opinion, the decision of the magistrates ought not to be disturbed. The analyst had stated that there was stone, sand, etc., to the amount of 3.5 per cent. in the sample of tea submitted to him. His attention was then called to the report of the Somerset House authorities supplied in another case dealing with caper tea generally. The analyst admitted that he had seen the report. An objection was taken to the admission of the report as evidence of the facts. It was not stated in the case that the analyst expressed any opinion on the report. In the result, the magistrates apparently brought their own knowledge to bear on the matter, and, without calling on the respondent to say whether the tea was in the same state as when it came to him out of bond, dismissed the information, being satisfied that there were always foreign ingredients present in tea.

Mr. Justice Channell concurred. He thought the Court could not interfere in this case. The justices were not wrong in law, unless it were in receiving something as evidence which was not strictly evidence. But the ultimate conclusion at which they had arrived was one to which they were justified in coming. They must have acted on some knowledge of their own. They were entitled to do so, as could be seen by "Reg. v. Field." *He thought, in fact, that they had treated the facts about caper tea as well known, partly, at any rate, because they had read in print in the report from Somerset House that there were usually foreign ingredients present in tea. The result of the finding of the justices was right. They thought that the adulterative matter was so near normal in amount as not to justify them in convicting the respondent. The proper course for them to have followed would have been to ask the complainant whether he would insist in going on if they intimated that, supposing the facts set out in the report were properly proved, they would not convict. In all probability the prosecution in such a case would be given up. The magistrates apparently treated this report as evidence. In that they were wrong, but it was only misreception of evidence at the worst, and nowadays, where the misreception of evidence did not affect the result, especially where there had been an acquittal, the Courts would not interfere. The appeal must be dismissed.*

THE VALUE OF CANNED MEATS.

MORE NUTRIMENT IN THEM, POUND FOR POUND, THAN IN FRESH MEAT.

IN view of the loose statements which have gained wide circulation regarding the nutritive value of American canned meats, tending to injure foreign and domestic trade in these goods, Secretary Wilson has called upon the director of the office of experiment stations for a statement of the conclusions of scientific experts on this matter. This statement has been received and is as follows :

"It is unfortunate that the public at large has so little appreciation of the nutritive value of canned meats. They are really cooked meats divested of the inedible portions—bone, gristle, etc.—which are found in fresh meats. In the cooking and canning, which is of the nature of boiling rather than roasting, water is expelled, but the amount of nutritive material removed is very small ; indeed, a pound of ordinary canned meat has, on the average, much more nutriment than the same weight of the fresh meat from which it is prepared. The removal of the bone and part of the water, while so little nutriment is taken away, leaves the meat in a less bulky and more concentrated form, so that pound for pound the canned meat has a higher nutritive value than the fresh meat.

"In a large number of analyses of fresh and canned meats, collected at Chicago during the World's Fair, and in other parts of the country before and since that time, and analysed under my direction, the proportions of the nutritive ingredients in the canned meats have been found to be larger than in the ordinary fresh meats. This is especially true of the protein compounds, which are used by the body to build up its nitrogenous materials, as blood, muscle, and bone. Among the analyses referred to, some of the largest proportions of protein were found in the boiled meats. Such prepared meats, made of good material and properly canned or otherwise preserved, are worthy of the very high esteem in which they have long been held."

The charge of inferior nutritive value, when applied to properly canned boiled meats, needs only investigation for its refutation. The experience of almost every family has shown that such articles are satisfactory foods. Man requires four classes of food ingredients for the proper maintenance of life : (1) Protein or nitrogenous matter, as is found in the lean of meat, casein (curd) of milk, gluten of wheat ; (2) carbohydrates, as sugar, starch, and allied substances ; (3) fat, as butter, fat of meats, etc. : and (4) mineral matter, such as phosphates and other salts.

Meat is one of the chief sources of protein in the daily food. As shown by chemical analysis, it is composed of water, protein or nitrogenous matter, fat, and a small percentage of mineral matter. The nitrogenous matter is made up very largely of myosin, the basis of muscle. Meat contains also a very small percentage of albumen, which is extracted by cold water but is coagulated by heat. This and a small proportion of other nitrogenous substance and mineral matters are practically all which can be extracted by water. If meat is plunged into boiling water when cooked, as is commonly done in canning, extremely little can be extracted.

In preparing the meat for canning, large pieces are put in vats of boiling water and thus cooked. This softens the meat, makes it more tender, and facilitates the separation of bone and gristle. After these are removed the meat is cut into pieces of proper size for the can. The top is then soldered on the can, but a small hole is left through which air and steam escape in the heating of the can which follows. This heating also kills the bacteria. The hole is then closed by a drop of melted solder and the can is hermetically sealed.

The cans are then tested to see whether this handling has been done so as to protect the meat from deterioration. To this end they are kept in a warm room for a number of days. If the bacteria have not been killed, the meat will

decompose, gases will be produced and the cans will swell. The number of cans that swell, and thus indicate imperfect handling, is said to average about one-fourth of 1 per cent. The meat in them is thrown into the waste-heap with the intestines and other meat refuse, and made into fertilisers.

By this common manufacturing process it would be impossible to remove from the meat which goes into the cans any considerable part of the actual nutriment.

The chief difference between the meat as prepared in this way and that ordinarily cooked in the household is that the canned meat does not contain the bone and gristle, which are not edible.

The averages of the analyses of American meat products now available give percentages of protein in fresh beef—rump, 14.6 per cent. ; tenderloin, 15.6 per cent., and other cuts not far from the same amount. The averages for canned beef are : "Boiled beef" 24 per cent., and corned beef 26 per cent. The proportion of fat in the canned meats analysed was relatively smaller, doubtless because the leaner meat was used for canning.

The value of meat, as of other food, for nourishment depends upon its digestibility ; that is, upon the proportion of nutritive material that is absorbed from the digestive tract during its passage through the body. Numerous tests have been made of the digestibility of fresh meats as ordinarily cooked for eating. The number of experiments made with canned meats is smaller, but there is no reason to assume any considerable difference between the two. Nearly all the protein of beef, as it is ordinarily eaten, is digested and assimilated by the system. The high nutritive value of properly cooked canned meat is therefore well settled by accurate experiment.

In the great stockyards in Chicago, Kansas City, and elsewhere, where nearly all the canned meat is put up, all the meat is inspected on the hoof and at the time of slaughtering by Government experts, who are on the ground all the time, and without whose examination not an animal is killed and no shipment of meat can be made without violation of Government regulations. This is the guarantee for the quality of the meat, whether fresh or canned.—*N. Y. Commercial.*

REPORT ON THE EXTENT OF ADULTERATION IN BELFAST.

THE Public Analyst (Professor Hodges) states : "Since my last quarterly report I have submitted to analysis from the city 168 articles of food. In the case of many articles which in former years were found adulterated no adulteration was discovered in the past year, but there has been a considerable increase in the sale of adulterated butter. There has also been an increase in the number of cases in which sweet milk was found mixed with water. Since February, 1898, 419 samples have been examined by me, 52 of which were found adulterated, and £147 15s. were imposed as fines by the magistrates. From the increased amount of fines inflicted it may be expected that a check will be given to the sale of adulterated articles in the city. The articles adulterated were : 19 samples of sweet milk, 19 of butter, 11 of buttermilk, and 3 of whisky. As in former years, I have found the inspector, David M'Master, most careful in the discharge of his duties."

VITRIOL FOR WHEAT DRESSING: AN ARTFUL ADULTERATION SWINDLE.

DR. J. A. VOELCKER recently analysed a sample of vitriol for wheat dressing, which he reports on as follows to the Bath Agricultural Council :

"Though made up to look like sulphate of copper (bluestone or blue vitriol), and the purchaser believing it to be and buying it as such, it was found in reality to be

nothing but the far cheaper and ineffectual material sulphate of iron (green vitriol), coloured with Prussian blue, so as to make it look like sulphate of copper. This fraud has, through the activity of a member of the Council of this society, been now exposed, but, from other similar cases of misrepresentation brought to my notice, there is reason to believe that there has for some time past been a great deal of defrauding practised upon the farmer in this respect. If, however, farmers do not make use of the facilities in regard to chemical examination which are so readily placed at their disposal by the Council of this and other agricultural societies, it can hardly be wondered at that they will from time to time be imposed upon."

In our opinion sympathy is thrown away upon farmers; their ignorance and supineness alone cause such frauds to flourish.

THE DYNAMITARDS.

SIR MATTHEW WHITE RIDLEY AND A HOLACAUST PER DAY.

IT is now almost four years since an effort was made by the S.O. Co. to coax the Scotch oil producers into a Paraffin Combine on the condition that they dropped the flash point question. We dealt (says *The Chemical Trade Journal*) with the general instability of the American offer at that time, and the overtures ended in nothing; and yet, as if driven to their last resource, another effort is to be made in London, on Tuesday next, to purchase the silence of the Scotch producers by a promise to force up the price of paraffin wax $\frac{1}{2}$ d. per lb.

We understand that the great John D. himself is coming, and no effort has been spared to heighten the colour of his pretensions to friendliness, for last week a paragraph went the round of the British press that, owing to the fall in oil, he had been losing at certain stages of the collapse about £200,000 per minute. Readers can take this with or without the usual grain of salt, just as they please, though even after two hours at this rate the losers would still be millionaires many times over. All we wish to make quite clear is, that in no manner whatsoever must this reported "tale of woe" be allowed to influence the judgment of those who have to weigh the worth of Tuesday's proposals.

There are two points on which we are quite at loss. Why have the Scotch producers been singled out for the favour of forming a protective alliance, and why are they asked to drop the flash point question? The production of oil in Scotland is a mere bagatelle compared with the American output. The real thorn in the flesh is Russia, and it is an increasing production like that revealed by the recent statistics published in the new Baku Journal, *Naphtha Business*, that they should try to bribe off and choke down. Possibly this selection has been made in order to give fresh zest to the cry of "Protectionists," with which the bile of British legislators has been so oft, so successfully, but so unwarrantably, stirred by the procurators of the S. O. Co.

With regard to the second point, we fail to see why the Scotch producers in particular should be thus enticed into a policy of passivity about the standard of safety. It is only among benighted politicians that the notion of this flash point being a Scottish movement has prevailed. We grant that one or two of the leading spirits, and particularly the chief leading spirit, chanced to be born north of the Tweed, but in endeavouring to silence the voices that proclaim for a reasonable standard of safety, the American plenipotentiaries have not merely to deal with a handful of Scotch oil producers, but with the British public, the British Parliament, and the British Press. We have sufficient belief in the integrity of all three, and the last in particular, to pit it against the seductive wiles of those who wish to cry peace where no peace is, or can be. We should still think the

same if the prime movers had been gaining £200,000 a minute instead of losing it. It is not within the power of the Scotch producers to sway or stay public feeling on this matter; and to purchase their silence is as futile as damming the Mississippi in order to dry up the Atlantic Ocean.

From what we gather, the Scotch oil makers are alive to these facts; and likewise for several other reasons are not disposed to favour any advances, no matter how tempting. We hope the result of Tuesday's meeting will bear out our anticipations.

There is but one thing we regret, namely, that the report of the London Chamber of Commerce upon Illicit Commissions is not already printed, so that a copy might have been presented to every one of the gentlemen who, after four years' persecution, are so anxious to stop the mouths of safe oil advocates with the extorted profits on paraffin wax. Who are these gentlemen who propose to advance the price of wax at will? The very suggestion should be enough to put up the backs of most British men of business.

PURE BEER.

THE report of the Beer Materials Committee has been expected for some time. There is a probability (says *The Irish Independent*) that while the apparent sympathy of the majority of the Committee with the brewers will lead them to favour a continuance of the "free mash tun" with practically no restriction whatever, a minority report will urge that the existing system affords insufficient safeguard against the use of deleterious materials, and enables brewers to sell as beer a liquor not manufactured, as it is popularly expected to be, entirely from barley, malt, and hops. The contentions as to the practical exclusion of beer from the advantages secured under the Food and Drugs Adulteration Act was very strongly supported before the Committee by well-known public analysts, who expressed the opinion that it was possible even now to detect the use of glucose, and that, if the law required it, methods would soon be discovered which would render the protection of the beer-drinker as practicable and complete as that afforded by law to the consumer of butter, coffee, or other commodities.

ELGIN COUNTY COUNCIL AND A FOOD AND DRUGS ANALYST.

DR. CAMERON, medical officer, having suggested the advisability of appointing a county analyst under the Food and Drugs Act, Mr. Walker, Altyre, said that they already paid Mr. J. Falconer King, Edinburgh, £10 a year as their analyst under the Fertilisers Act, but they had never called upon him to do anything. He did not think it would be trespassing too much on his generosity if they asked him to take up additional work at the same salary, seeing that anyone who got an analysis had to pay a fee.

After some talk Mr. Walker moved that before doing anything they should first realise what their position was with regard to the appointment at present held by Mr. Falconer King. This, however, was not seconded, and a motion by Rev. Mr. Cassie, Hopeman, that the clerk be instructed to write Mr. Falconer King, asking what fees he would charge if they appointed him their analyst under the Food and Drugs Act, and also what fees he would charge for analysing samples of water, was agreed to.

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Food and Sanitation.

SATURDAY, FEBRUARY 25TH, 1899.

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THE GOVERNMENT AND NATIONAL FOOD SUPPLY.

MR. SEATON-KARR's amendment to the address in the House of Commons was negatived without a division; but it brought a useful statement of the views of the Government on this vital question from Mr. Ritchie, the President of the Board of Trade:

Mr. Ritchie said the question upon which his hon. friend asked for an inquiry was a highly important one; but it was not new, and although there had been no Royal Commission appointed to inquire, it must not be supposed

that the Government had been indifferent to the matter. Investigations and inquiries had been made by the Board of Admiralty and by the Board of Agriculture, and he was glad to be able to state that the result of these inquiries had not led the Government to anticipate the disastrous consequences which Mr. Seton-Karr feared. (Hear, hear.) Regret had been expressed that so small a quantity of the land of these islands was under grain cultivation, and while it was true that grain cultivation had diminished of late years, it did not mean that the land not producing grain was not producing other kinds of food for the people. He was informed by the Minister for Agriculture that the land was never more highly cultivated than at the present time. (Cries of "Oh.") Although rents might be low, and the prices of the produce unsatisfactory, yet the land was still producing, and, he was informed, producing as plentifully as any other land in any part of Europe. He would be glad if by some arrangement we could obtain a larger supply of food from our own colonies; but if, in order to get this larger supply, anything in the nature of Protection should be necessary, that fact would be such a departure from the policy now adopted by the bulk of the nation and by politicians of both parties that he was afraid the result desired was not likely to be attained. A strong and powerful navy was the prime factor in safeguarding the supply of food from abroad to this country, and no Government would be worthy the confidence of the nation who did not make the preservation of the trade routes the principal object of their policy. Unless this country was blockaded, we were not likely to die of starvation, because high prices would attract corn from every quarter of the globe, and so long as corn was not made contraband of war, corn could come freely into our ports in neutral bottoms. (Hear, hear.) The suggestion of a system of bounties upon home-grown corn he did not consider within the range of practical politics, and if this amendment were acceded to and an inquiry held, it could but resolve itself into an inquiry as to whether Free Trade was or was not good for this country. (Cheers.) Another suggestion made was that there should be a system of national insurance, but, assuming that our powerful navy could keep our shores free from blockade, and that the losses could be kept down to 5 per cent., the cost of such a national insurance would come to something like £60,000,000. (Hear, hear.) Another remedy suggested was the storage of grain, but that would be another addition to the serious responsibilities of Ministers of State, and it would lay them open to frauds of all sorts, with regard to which they would be met with difficulties which it would be no easy matter to overcome. Then it would be necessary to have not only granaries, but warehouses, filled with cotton, jute, and other raw materials. As to the granaries, no Government would be able to resist the demands for the distribution of the stored grain in time of scarcity, and farmers would have something to say about the competition with them of Government granaries. It would be far cheaper and better for the Government and the country, when the time of the pressure came, to go into the market and buy what was required. He did not believe that if the navy was kept up in a sufficiently strong state to protect the trade routes of the country and to secure our shores from being blockaded, there was the remotest chance of starvation, though there might be of high prices. But he did not believe that even high prices would last for any considerable time. (Hear, hear.) The Government were unable to accept the amendment, but the matter was not one that had escaped the attention of the Government. It had been carefully inquired into, and he had given the House the results of those inquiries. (Hear, hear.)

Mr. Ritchie's exposition of the views of the Government are very valuable, albeit we fear too rosy. We have no guarantee that corn would not be treated as contraband of war. As Europe now is, it is a powder magazine, and no human being can say how the cards may be shuffled and what partners may apply the match. It is in vain to pretend we have a single real friend on the continent.

Germany would gloat over any disaster to us, as it did when Kruger received the Kaiser's telegram. France remembers not only Waterloo, but a bitter humiliation at Fashoda. Anyone who believes that were England in death-grips with foreign enemies corn for her starving people would be permitted to enter her ports lives in a fool's paradise.

England's navy is not infallible, and there are those in plenty who think little of many of our ships in the light of the results disclosed in the China-Japan and Spanish-American naval battles, and do not believe even that our unfortified places would be left unbombarded. Blucher's exclamation on seeing London, "What a city to loot!" would, we fear, prove too much for mild-mannered conventionalities. Altogether, we think the subject one worthy of a far deeper inquiry than Ministers, however capable, or Government officials can give it.

THE BRITISH ANALYTICAL CONTROL.

MANY readers have asked us for information respecting the "British Analytical Control."

We know little of it, but we much mistake English traders if they would put themselves under the control of any coterie of persons, however pretentious their claims to speak for the analysts of the United Kingdom. For ourselves we are not fetish worshippers, and when the policy or the practices of public analysts have appeared to us deserving of censure we have criticised analysts as freely as we have traders. Perchance in this we have hurt the importance of some frog who would be a bull, and he is going to blow himself out in British Analytical Controlling. If so he has his work cut out, but what independent journals think of the game of "spoof" is shown by the following opinions: The "Chemical Trade Journal," February 18th, says:

"THE 'BRITISH ANALYTICAL CONTROL' AUTHORITY.

"The latest perversion of analytical chemistry to the ends of the 'boomer' seems to have taken the shape of a wonderful authority bearing the burden of the above mysterious title. The objects, which are threefold, look very nice on paper. They are as follows: '1. To protect the health and interests of the public by affording an authoritative and permanent guarantee that the nature, substance, and quality of food and other products are in accordance with the demand and expectation of the purchaser, and by directing attention to these products, which, being under permanent analytical control, may be accepted as free from injurious or doubtful constituents, and as pure, genuine, and good in the strictest sense of these terms. 2. To protect manufacturers and importers against the unfair competition arising from the introduction and sale of imitation and of inferior or adulterated articles. 3. To enable private purchasers and consumers of controlled articles to satisfy themselves, independently and without expense, as to the character and quality of any samples of such articles offered for sale.' All we want to know is who is to pay the piper. At present we see very little to guarantee the superiority of goods bearing the stamp of the 'British Analytical Control' any more than the quality of patent pills is vouched for by the Inland Revenue stamp on the wrapper. For the rest we think we can safely commend this new authority to the attention of the censors of the Institute of Chemistry. The fulsome analytical puff has been blossoming pretty freely again of late. This latest development may assist in bringing matters to a head."

The "Pharmaceutical Journal," of February 4th, has the following free criticism:

"The 'British Analytical Control' is an organisation of a curious kind, apparently called into existence by an obscure process of spontaneous generation, to supersede legislative enactments and do away with the need for official public analysts. Its object, as declared in an all too brief circular letter, presents itself as a truly laudable

one, being nothing less than 'to check the sale and importation of adulterated and inferior articles and to encourage and protect legitimate trade.' That object is to be attained by manufacturers submitting sealed samples of their articles for scientific examination by the B. A. C., and if on analysis they prove to be 'pure, genuine, and good, in the strictest sense of those terms,' and subsequent examination of samples purchased in the open market confirms that analysis, the articles 'will be accepted and placed under the British Analytical Control.' Official stamps will then be issued by the Control 'to be affixed to the packages or vessels in which the controlled articles are sold,' and purchasers need no longer worry their minds about adulteration. Whether all this work is to be done for pure philanthropy, or for the mere love of analysis and to relieve the promoters of the scheme of a lingering sense of anxiety with regard to the safety of the public, does not at present appear, for no mention is made in the circular letter or in the regulations published in the 'British Food Journal' of any payments to be made by manufacturers whose articles are 'accepted,' while at the same time private purchasers or consumers are to be enabled to satisfy themselves 'without expense as to the characters and quality of any samples of such articles offered for sale.' Payments by manufacturers, indeed, might not unreasonably be regarded as a kind of blackmail, but here, apparently, we have a body of large-hearted public analysts, some of whom are members of no less a body than the International Commission on Adulteration, offering their services free of cost, with Control stamps thrown in. It is not quite clear whether the analysts constituting the Control will, personally or by deputy, affix the official stamps, or whether that part of the business will be left to the manufacturers. To make assurance doubly sure, the former course suggests itself as the more desirable one, as this 'scheme for solving a public problem of such magnitude and importance' would appear then to be more than ever entitled to receive 'the general approval and support of cautious and responsible persons.'"

The next critic of the new analytical advertisement seekers is "The Cowkeeper and Dairyman's Journal," a trade organ which has for years advocated a more rigorous and useful enforcement of the Acts against milk and butter adulteration. Our contemporary says:

"The desire of the wolf to act as shepherd is amply illustrated by the appearance of a new contemporary, 'The British Food Journal and Analytical Review,' the official organ of the International Commission on Adulteration. Now, of course, such a journal, to be an honest authority on British food, should have on its staff producers, breeders, growers, manufacturers, distributors, merchants, and consumers. But what do we find? The devouring hierarchy of analysts in wholesale possession, exclusive and superior. Nothing but analytical chemists to speak on British food. What has that excellent journal 'Food and Sanitation' done that its efforts should be seriously competed with? To deliver the whole food-trading community into the hands of their executioners is one of the most ridiculous proposals ever disclosed. The object is sordid pelf. The analyst is too exclusive, and advertising is profitable to them. Thus, as every belauded nostrum requires scientific approbation, the said cute advertising merchants will duly induce their confiding clients to illumine the pages of the 'B. F. J.' The opinion of the food-producing and consuming community will not always be in accord with the scientific staffs of self-constituted dictators."

Our readers know what we have done. When we began "Food and Sanitation" in 1892 the samples taken for analysis were 29,028 yearly. Mainly owing to our strenuous, independent advocacy, and our exposure of local bodies who "burked" the Acts actively began until 46,856 were taken last year. Further, we caused the Select Committee on Adulteration to be appointed, and when a new Act is passed its presence on the statute book will be due first to the editor of this journal and next to Mr. Otto Hehner, who we see is not associated with the precious venture our contemporaries so scathingly expose. We

do not remember any of these British Analytical Control gentlemen being other than dumb when we exposed Somerset House and "went for it" as it merited. But they perhaps think there is a chance to step in, filch whatever kudos may be filchable, and that by stirring and stumping and doing their own trumping they will cause themselves to be regarded by an ignorant public as the superior and only analytical authorities of the United Kingdom. Well, not only the Institute of Chemistry but the Society of Public Analysts may have something to say about that. We believe some of the gentlemen whose names are on the list have allied themselves with it under a mistaken idea as to its aims and the very invidious position it must of necessity occupy in the minds of thinking men. On reflection such members of the "Control" will no doubt disassociate themselves from it.

WATER AT SPIRIT PRICES.

WILLIE BRIGGS, licensed victualler, of the Wickham Arms, Cleckheaton, was, at the West Riding Court, Bradford, on February 16th, charged, under the Food and Drugs Act, with having sold adulterated whisky. Inspector Duce, who prosecuted, stated that he bought a quantity of whisky on the defendant's premises, and upon analysis it was found to be 27.8 under proof instead of 25. For the defence, it was submitted that the defendant's assistant had put in too much water in mistake. A fine of 40s. and costs was imposed, with the alternative of one month's imprisonment.

BEER ADULTERATION.

ALFRED GORDON, landlord of the King Henry VIII. public-house, King Henry Street, Islington, was fined £20, with £5 5s. costs, at North London, on February 15th, for diluting stout with clouded bitter ale to the extent of three gallons to the cask.

THE LIPTON BUTTER CASE.

At the Lowestoft police-court, on February 16th, John King, grocer's manager, appeared in answer to an adjourned summons for selling adulterated butter at Lowestoft, and also for selling margarine in unlabelled packages on December 6th. Mr. Frederick Low prosecuted on behalf of the Town Clerk (Mr. R. B. Nicholson), and Mr. F. W. Beck again defended. The case was adjourned so that a sample of the butter might be analysed at Somerset House. The analysis presented at the last hearing was, "Butter 80 per cent.; fats other than butter fat 20 per cent."

Mr. Beck addressed the Bench, stating that they had had all the evidence brought before them, and the Clerk had received the certificate from Somerset House, and he now asked the magistrates to exercise their discretion. He considered that the certificate should be final.

Mr. Low thought that fresh evidence might be called, and it was not necessary that the Somerset House certificate should be final. He had fresh evidence to bring before the court, and he submitted that he was entitled to bring the evidence forward.

The following is the copy of the Somerset House analysis: "The sample of butter marked No. 350, and referred to in your letter of the 14th inst., was received here on the 13th inst. securely sealed. We hereby certify that we have analysed the butter, and declare that from a consideration of the results of a full analysis of the fat we are of opinion that the sample in question affords no evidence of the presence of fat other than butter fat.—Signed by G. Lewin, H. W. Davis."

Mr. G. Lewin said he analysed the sample with the assistance of Mr. Davis. He had been six years in his present position, and had had considerable experience. The butter was rather low down in figures, but it was quite genuine. He was not aware that it was an Irish butter,

but that made no difference. The sample in the case was not a suspicious butter, and every figure, obtained as a result of the various analyses, confirmed the others. There was no doubt but that the butter was pure.

Mr. William Lincoln Sutton, public analyst for Suffolk and for Norwich, said he applied a variety of tests, and came to the conclusion that it was adulterated butter. All the tests were unfavourable to the purity of the butter, and he found it a butter of the lowest quality.

Mr. E. Beven, public analyst for Middlesex, had also analysed Mr. Sutton's sample, and said he considered it was "highly probably adulterated." He would not give a definite answer that the butter was adulterated.

After consultation, and upon returning into court, the chairman stated they had carefully considered the evidence in the case. They were satisfied that the butter was pure, and they dismissed the summons. They allowed Messrs. Lipton and Co. £15 15s. costs.

MARGARINE AS BUTTER.

At Birmingham, on February 17th, George Richard Jackson, of Morville Street, was summoned for exposing a parcel of margarine for sale unlabelled, and also for selling margarine in an unlabelled wrapper on January 21st. Defendant explained that he and his wife usually managed the shop, but on the date in question both were ill, and the shop was in charge of an assistant, who had been hurriedly engaged. Inspector Jones said that a youth who was usually in the shop was there on the occasion, and the assistant had been employed by Lipton's, and must know his business. It was a fact that samples taken on previous occasions at defendant's shop had been found correct. The Bench said they would make allowance for defendant's excuse, but it was his duty to see that the assistant was properly instructed in his work. Defendant was fined 40s., and costs in each case.—Francis Hildick, Monument Road, was fined £5 and costs for selling margarine in an unlabelled paper.

At Cork, on February 15th, Miss Margaret Hayes, 17, Merchant's Quay, was summoned by Sergeant Ralph, Inspector under the Food and Drugs Act, for having on the 31st ult., sold to complainant, to his prejudice, a pound of butter which was so adulterated as not to be of the nature, substance, and quality of the article demanded, in contravention of the statute. Mr. B. C. Galvin, solicitor, prosecuted, and the defendant was not professionally represented. The complainant stated that on the date in question he entered the defendant's shop, and asked for a pound of butter, for which he paid 1s. 1d. Defendant took the butter out of single pounds, similarly papered, which had been placed on a dish on the counter. The price was a little more than was generally charged for pure butter. Complainant then informed her that he would get the butter analysed, and so divided it in the usual manner. The analyst's certificate stated that the sample contained not more than 5 per cent. of butter in its fat. The defendant said the butter was supplied to her by a woman who was unknown to her. Mr. Walker said that was the old story in such cases. The sergeant said that he believed there was a trick played on the defendant, as witness went in after getting the result of the analysis, and asked if that woman had supplied her with any more butter, to which she replied she had not. Mr. Galvin said the defendant had very nearly complied with the provisions of the Margarine Act. In a basket she had two prints of "A Mixture," and on the top of it was a slip of paper with the word "Margarine" printed on it. But for persons not in the grip of a policeman it would be very easy to turn the card upside down. He (Mr. Galvin) understood that the defendant had been fined in that court previously for selling adulterated milk. Mr. Walker said the case was a very flagrant one, and they could not entertain the excuse that defendant did not know what she was doing. The public must be protected, and the defendant would have to pay a fine of £2, with 20s. costs.

MILK, A LITTLE BIT OFF THE TOP.

At Westminster, on February 14th, The Glynde Creameries (Limited), of Walton Street, Chelsea, were summoned, before Mr. Marsham, by Mr. F. Aris, on behalf of the St. George's (Hanover Square) Vestry, for selling milk from which 25.6 per cent. of the original fat had been abstracted.—Mr. Hitchens supported the summons, and Mr. Ricketts defended.—The usual evidence having been given, and the certificates handed in, Mr. Ricketts read a letter from a person, whom he described as unprincipled, who had admitted that for some time past he had been taking "a little bit off the top" of the morning's milk before it left his farm for the defendants. This was done in order that the son of one of his labourers, who was dying from consumption, might be nourished. The defendants, who were a most respectable firm, had no suspicion that they were relieving the labourer's son at their own expense.—Mr. Marsham imposed a fine of 40s., and 12s. 6d. costs.—William Thomas, of Kinnerton Street, was similarly summoned.—In this case the abstraction was equivalent to 20.5 per cent.—The penalty was £1, with 12s. 6d. costs.

FALSE WARRANTY PROSECUTION.

At Liverpool, on February 15th, Geo. Moseley, farmer, of Wem, Shropshire, was summoned for having given a false warranty as to new milk. Mr. Pierce prosecuted, and Mr. Rudd defended. On the 5th January the defendant consigned to the Callow Park Dairy Company in Liverpool a consignment of new milk. A sample was afterwards taken and analysed, with the result that it was found to have been deprived of one-fourth of its cream. The Dairy Company, having been given a warranty, proceedings were taken against the defendant. For the defence it was stated that as soon as the cows had been milked the milk was despatched to the railway station. A fine of £5 and costs was imposed.

ADULTERATED CAMPHOR.

At Todmorden Petty Sessions, Mrs. Martha Hartley, a local drug vendor, was summoned by the West Riding County Council for selling adulterated camphor. The sample purchased by the inspector was declared by the analyst to contain 97.1 per cent. of olive oil and 2.9 of camphor, or 1.7 less than the normal proportion. Taking into account that this was the first prosecution of the kind, the Bench imposed a nominal penalty of 10s. and costs.

A ROTHERHITHE NUISANCE.

At Greenwich police-court, Henry Winckler, of Trinity Wharf, 305, Rotherhithe Street, Rotherhithe, appeared, before Mr. Kennedy, to an adjourned summons at the instance of the Rotherhithe Vestry, who alleged that the business carried on at his factory constituted a nuisance injurious or dangerous to health. The evidence called by Mr. Stokes, on behalf of the Vestry, was to the effect that offensive smells emanated from the factory of the British Drying Company, of which Mr. Winckler was the head. Dr. Shaw, the medical officer to the Vestry, described the smells as injurious and a nuisance. A large number of witnesses were called on either side, many complaining of the nuisance, and others saying that although they lived in the immediate neighbourhood they experienced no discomfort from the smells which arose from drying grain. One witness said she considered the smell healthy, and another expressed the opinion that only teetotallers could smell anything offensive in it. Eventually Mr. Kennedy said he considered there was a nuisance, and fined the defendant £25, and £10 10s. costs.

UNWHOLESOME FOOD.

At Clerkenwell, on February 17th, Vernon Fell, of 1, Mornington Road, Bow, was summoned by the Clerkenwell Vestry, before Mr. Horace Smith, for selling to Mr. Dawe, of 1a, Weston Street, Clerkenwell, fifty-eight tins of condensed milk unfit for human consumption. Joseph

Fell, trading as Vernon Fell and Co., was summoned for the same offence.—It was stated that Joseph Fell was trading in the name of his son, Vernon Fell, a young man of nineteen, and proceedings were consequently taken against Joseph only.—Charles Lehmann, of Lehmann and Co., condensed milk manufacturers and merchants, said his firm sold twenty cases of milk which had generated gas, and "bulged" the tins, for pig food only. It was stated in the invoice that the milk was unfit for food of man. The cases were sold for 2s. 6d. each, instead of 12s. 9d., the price of good milk.—Inspector Bartlett, of the Vestry, said Mr. Dawe brought him seventy-four tins of milk, fifty-eight of which were "blown," and had been pricked and re-soldered. Some of the tins had not been so treated, and samples of these were found to contain sweet milk. The officer, accompanied by the medical officer of Clerkenwell, visited the defendant's premises at Shadwell, and found a very large number of tins of milk there, many "blown," showing decomposition going on inside. Some of these tins had been pricked, and others recently re-soldered. The process of labelling the tins appeared to be proceeding, the label bearing the words "Honey Brand." There was also a stencil plate there for marking cases "Prepared in Holland." There were also other tins there, some containing salmon. One of these was opened, and the fish was putrid. The defendant said everything in the warehouse was for pigs' food, but that he could not send the cans out in their blown condition. The officer asked him whether the pigs were particular as to the outside of the tins, but the defendant did not reply.—Dr. Glaister, medical officer of Clerkenwell, corroborated, and Dr. Thomas, medical officer of Limehouse, who was also present at the examination, said he had to seize 1,885 of the tins of food found upon the premises—three parts of the stock.—The sale of the milk to Mr. Dawe having been proved, the case was adjourned.

PTOMAINES AND TOXINS.

In his second lecture at the Royal Institution, on February 16th, Dr. MacFadyen, while classifying the various theories that have been formed with respect to the poisons which germs breed in the blood, referred briefly to those mysterious poisons known as ptomaines. Ptomaines are poisons which are found in dead or decomposing matter; and the public is chiefly made aware of them from hearing that deaths which have occurred after eating bad tinned provisions have been due to ptomaine poisoning. But, as Dr. MacFadyen explained, there is another side to the question. These ptomaines are produced by the action of noxious bacilli on the substances surrounding them; and when produced they bear a strong resemblance to vegetable alkaloid poisons—so strong, indeed, that for a long time their effects were indistinguishable from those of obscure vegetable poisons which might have been criminally administered. Thus, for instance, there was the celebrated case of General Gibboni, in Italy, whose servant was suspected of having poisoned him with "delphinine," an alkaloid poison. But Selmi, the Italian chemist, after examining the stomach, and extracting the poison, proved that the death was not incompatible with ptomaine poisoning, and that in fact, whereas ptomaine could have caused all the symptoms discovered, delphinine could not; and, further, that delphinine produced certain reactions which the poison found in the stomach did not. In the same way it was shown that the death of a widow named Sausonnia was not due to morphia, as had been suspected; and in still another case a ptomaine was proved to have done the poisoning, which had at first been attributed to strychnine.

Passing from this subject to the consideration of disease bacteria proper, the lecturer described with admirable clearness the way in which the poison, the toxin of the diphtheria bacillus, is cultivated—until from this evil germ the bacteriologists can produce that which will benefit the human race. The simplest way of first procuring the diphtheria bacillus is that which is now pursued by nearly every doctor in the civilised world in the course of diagnos-

ing the disease. A little wad of wool at the end of a wire is pressed against the back of the throat of the patient suspected of diphtheria. If the diphtheria germ is present, some of its representatives will cling to the wool, which with its wire is replaced in a sterilised test-tube, and sent to one of the bacteriological laboratories in London. The wad is there placed in a bath of peptonised beef broth; and if there are any diphtheria bacilli present, then in from eight to twelve hours afterwards the bacteriologist can detect them in the broth, and can telegraph the result of his investigations to the doctor who sent them. Dr. MacFayden concluded his lecture by explaining how from these pure growths of diphtheria bacillus the bacteriologist is able to isolate the poison which these tiny micro-organisms produce—the poison which, if unchecked, will kill the patient, but which if administered to him under proper conditions and in proper quantities, by some miracle of Nature's laboratory, may prove the antidote to its own poison.

GROCERS' DEPUTATION ON FOOD ADULTERATION. CORRESPONDENCE.

STATEMENT BY MR. LONG.

MR. WALTER LONG, M.P., President of the Board of Agriculture, received at his offices in St. James's Square, on February 15th, a large deputation from the Federation of Grocers' Association of the United Kingdom on the subject of the Bill to amend the Sale of Food and Drugs Act. Mr. Long was accompanied by Sir Jacob Wilson, Mr. T. W. Russell, M.P., Mr. T. H. Elliott, C.B., Major Craigie, Professor Thorpe, Mr. G. Arbuthnot (private secretary), and Mr. Arbuthnot.

Mr. George Whiteley, M.P., in introducing the Deputation, said the Federation of Grocers' Association covered, he understood, the whole of the grocers' associations of the United Kingdom—at any rate, of Great Britain.

Mr. W. Findlater, the President of the Association, said the subject of food adulteration was perhaps more important to the traders than the Federation represented than to any section of the commercial community. In the main in all the Acts affecting adulteration the chief burden fell upon the retailer, and that the present acts had been attended with many grievances was evident from the Report of the Select Committee of 1886, out of the 23 recommendations of which twelve dealt directly with grievances put forward by the retailers. Their duty as distributors was to supply the public, of whom the working-classes were a large proportion, with articles of food suitable to their pockets and palate, and they suggested that any action of the Government which would interfere with the free import of such goods as were wanted by the country would be a serious thing for the trade, and an unwarrantable interference with the liberty of the public. His main object was to point out that in any Bill which the President of the Board of Trade might bring in, it was most important that the interests of the retail distributor should be fully considered, and that the recommendations of the Select Committee of 1896 in this respect should receive most careful attention. The Federation were desirous that the law should be so strengthened as to make it more equitable and practical to the honest, and more effective in reaching the dishonest trader.

Councillor Shirley, of Bristol, said one of the chief alterations desired in the law was to provide that an invoice should be a sufficient warrant for a shopkeeper for goods which he had purchased as pure, and which he sold in the condition in which he received them. The question had been the subject of several decisions in the High Court; but even now the definition of a warranty was in a very unsatisfactory state. It had been clearly demonstrated by the Select Committee that the retail trade were not the adulterators. He went on to complain that prosecutions in regard to margarine were taken under the Food and Drugs Act instead of under the Margarine Act, which greatly prejudiced the position of the seller, be-

cause, in the latter case, the shopkeeper was unable to avail himself of his warranty, or to show that he had done everything to get his assistant to carry out his instructions. The Federation had not the slightest desire to protect anything in the nature of fraud. He proceeded to draw attention to a number of other points, in regard to which alteration of the law was needed, and suggested that power should be given to the authorities at Somerset House to conduct inquiries regarding disputes as to articles forming the subject of prosecutions.

Councillor R. Jarvis, Birmingham, urged that where an error had been made by an assistant without the knowledge or connivance of his employer, the latter should be exonerated from blame. As to margarine, it was better than inferior butter, and was of immense benefit to the working-classes, and, therefore, its sale should not be prejudiced.

Mr. Long, in reply, said the interests the Deputation represented were not the only interests that had to be considered by the Government in introducing legislation, nor were those interests by any means the only interests which were concerned in the administration of the Act which they wished to see amended. At the same time, he could assure them their views would be fully considered. He would relieve some of their anxiety immediately. The Deputation objected to legislation which the Government, through himself (Mr. Long), had already given notice to introduce, because it affected only a portion of the industry—dairy produce. Since then, however, the matter had been further considered, and the President of the Local Government Board had agreed that in the Bill to be introduced by him (Mr. Long) the proposals of the Local Government Board should also be adopted (applause), so that the Bill would apply not only to agricultural products, but to the general question of the amendment of the law as considered by the Select Committee over which Mr. T. W. Russell presided, and which had made a very exhaustive report. There was one misconception he should like to remove. There had been a general impression amongst those whom the Deputation represented, and those not directly connected with agriculture, that in consequence of the Bill dealing with adulteration being in the hands of the Minister of Agriculture there would be an undue regard for agricultural interests and an undue neglect of the interests and rights of other classes. He was not astonished at such a view being held in some quarters; but in a matter of this kind he thought it must be obvious that, if the interests of those who were solely connected with agriculture were to be permanently served it could only be by legislation, which would be equitable in its incidence upon all classes (hear, hear), and with a due and proper regard, not merely for the rights of those who would be affected by its just administration, but for the just rights of the whole community. They might rest assured that in any proposals to Parliament they would do nothing calculated to harass the great interests the Deputation represented or interfere with any properly conducted trade (hear). It had been suggested that day as a criticism of the Government disposals that the administration of these Acts would fall into the hands of two different departments, and a question was asked whether the Board of Agriculture could not deal with certain subjects—pickles, pepper, and mustard. Although the Board of Agriculture was ambitious, they did not desire to embroil themselves with questions of this kind, and were quite content to leave with the Local Government Board the care of these valuable articles. However, the Board of Agriculture had done good service in the past by examinations and analyses to secure the purity of certain commodities. He could not take the Deputation into his confidence before he introduced the Bill into Parliament, which would take place very shortly, but he might say that he agreed with some of their proposals and disagreed with others. Generally speaking, he might say that although the majority of the traders in the country were anxious that trade should be carried on honestly, and with an entire absence of fraud, there was abundant evidence that fraud

was carried on to an altogether undue extent; and, further, this fraud was due not so much to the weakness of legislation as to the want of uniformity in administration (hear, hear). They saw in some cases that rigid and vigorous enforcement of the law drove out fraud within a district, but the dishonest trader found a home and refuge in some other area close by. He believed that very moderate alterations of the law in the way of bringing about uniformity of administration would largely reduce those evils without harassing any industry or interfering with any legitimate trade (hear, hear). The Board of Agriculture had been sometimes unfairly assailed, and there was an invariable impression in the minds of people who were not themselves connected with agriculture that there was enshrined in the records and archives of the Department a supreme love of the policy of protection. They were always suspected in whatever they did that the Department was governed by some idea of protecting some industries as against foreign industries. He did not believe there was any foundation for this charge. But in regard to this particular question both the Government and the Department fully recognised the fact that not only would it be unjust and unpolitic, but impracticable and impossible to attempt to interfere by harassing methods with a legitimate trade which provided for a great want on the part of a majority of the population and gave especially to the poorer classes a wholesome and valuable article of food at a price which was within their means. All that they were entitled to ask was that the articles should be sold for what they were, and not for something else. If it could be shown that the law was not strong enough, or wanted improvement in administration, the country was entitled to have it. Approaching the subject from that point of view, and with a determination to do their best to make equitable proposals as affecting the whole community, they hoped to carry through Parliament a measure which would largely reduce, if not put an end altogether, to adulteration and fraud, without unduly harassing any industry or interfering with any legitimate rights of the majority of the community.

In thanking the right hon. gentleman, Mr. George Whiteley, M.P., said he had never listened to a more satisfactory reply to this question.

The Deputation then withdrew.

THE NEW LAW ANENT ADULTERATION OF FOODS IN FRANCE.

A SEVERE measure has been passed by the French Senate, but not yet by the Chamber, against the fraudulent sale of merchandise and the adulteration of foods and other agricultural products. Penalties of three to twelve months' imprisonment, and fines of 100 to 5,000 francs, or one of these penalties alone, will be imposed, if the Bill becomes law upon any person who is convicted of having deceived or tried to deceive the purchaser as to the nature, substantial qualities, composition, and usefulness of any merchandise; or as to its kind or origin where one of these designations may be considered the principal cause of its purchase; or as to the quantity of the goods delivered; or as to their identity, by the delivery of goods other than those chosen or contracted for. The same penalties are prescribed for anyone who adulterates, or exposes for sale, or sells adulterated articles of food for man or beast, or drugs, or agricultural products. Imprisonment may be extended to two years if the misdemeanor has been committed by means of false weights or measures, or by tricks or proceedings tending to falsify analysis, weighing, or measuring, or by means of fraudulent indications calculated to lead the purchaser to believe that the goods have been exactly tested. When any adulterant is injurious to health, imprisonment for three months to two years is to be compulsory, with a fine of 500 to 10,000 francs. These penalties are to be applicable even if the injurious adulteration be known to the purchaser or consumer. Lighter penalties are provided for persons found keeping in any place of business adulterated articles or instruments of deception, such as those alluded to above; but when it is

a case of keeping food injurious to health, imprisonment for three to twelve months and a fine of 100 to 500 francs must be imposed.

HULL BUTCHERS AND COMPENSATION FOR TUBERCULOSIS CATTLE.

DISGRACEFUL ADVICE BY THE ROYAL AGRICULTURAL SOCIETY.

A FORTNIGHT ago Hull butchers showed some common sense and spirit by refusing to be any longer the victims and scapegoats of lordly and other stock-breeders. On the 16th, some frightened, pitiful knights of the cleaver, afraid of bearding their lords and masters, the stock-breeders, wanted to apologise and back out from refusing to buy animals without a warranty. Member after member urged a compromise with the farmer, ignoring entirely the obvious truth that unless the farmer and the lordly stock-breeder can be made to suffer in pocket for selling their tuberculous cattle butchers stand no chance whatever of compensation from the Government, for the simple reason that stock-breeders are in the Ministry in both houses, and the butchers have only one voice, and that in the House of Commons. If anything were needed to show what pitiable, deluded creatures these Hull advocates of knavery upon their fellow-butchers are, the following disgraceful circular ought to be enough:

With the object of assisting dairy farmers in meeting the requirements of sanitary authorities, the Council of the Royal Agricultural Society are issuing a circular, in which they say:

In a small proportion of cases tubercle bacilli may be detected in milk by microscopic examination, and such milk is always highly dangerous. It ought to be clearly understood, however, that failure to detect the bacilli by microscopic examination of milk is not reliable evidence that such milk is free from the germs of tuberculosis. The tuberculin test is the only safe and nearly certain method of discovering the existence of tubercle in cattle. When it is intended to employ the test, the owner of the cattle should apply to the Principal of the Royal Veterinary College, Camden Town, London, N.W., giving the name of his usual veterinary adviser, to whom printed instructions will be sent. If desired, the name of a veterinary surgeon in the district will be suggested. Animals which react to the test, thus indicating that they are affected with tuberculosis, should be separated from those that do not react; a slight partition covered with tarred felt, to divide a shed into two parts, will suffice.

All animals which are affected with diarrhoea, cough, or wasting, should be removed from contact with other animals. Overcrowding, imperfect ventilation, dirt, and darkness favour the spreading of the disease. Tubercular disease of the udder ought always to be suspected when a painless hard lump, slowly enlarging, can be detected in one or more of the quarters.

As to the course which the owner should take with regard to the reacting cows, it can only be said that "the sooner they are sent to the butcher the better. As it is impossible to determine at what particular moment the udder may be invaded, and the milk become infective, a strict regard to sanitary laws would exclude the milk of tuberculous cows as unsafe for food, unless it had been effectually sterilised before distribution for use.

There is no disguise about the advice—it is plain. "When you know," say these lordly and other shining lights of our Lords and Commons who form the Council of the Royal Chamber of Agriculture, "that an animal is tuberculous, the sooner it is foisted on the unsuspecting butcher the better. He may have it seized and destroyed, be fined, or sent to prison, lose his money and his trade, whilst we, who thus hocus, rob, and ruin him, go scot-free." It is hard to believe such shameful advice comes from the Royal Agricultural Society of England. It smacks more of the horse-coping gang who were last week sent to penal servitude, or of Fagin's thieves' kitchen. There it is, however, and it contains a moral which every butcher should lay to heart.

GROGERS AND THE SALE OF FOOD AND DRUGS ACT.

DEPUTATION TO MR. LONG.

ON February 16th a deputation from the Federation of Grocers' Associations waited on the Right Hon. W. H. Long, M.P. (President of the Board of Agriculture), at the offices of the Board, St. James's Square. The deputation, which was introduced by Mr. Whiteley, M.P. (Stockport), consisted of Messrs. W. Findlater, M.A. (Dublin), Jarvis (Birmingham), Shirley (Bristol), H. Cushen (London), Collis Clark (London), Horder (Salisbury), Duke Dyke (London), Pitts (Northampton), Burgis (Leamington), Winn (Hull), Slingsby (Coventry), N. West (London), Thomas (Swansea), Gower (Newport), Goodrich (London), Dawes (Wellingborough), Hollingdale (Newport), and A. J. Giles (secretary of the Federation). Mr. Long was accompanied by Mr. T. W. Russell, M.P., Mr. T. H. Elliott, Major Craigie, and Professor Thorpe.

The following memorial was presented to Mr. Long:

"The deputation waiting on you to-day, on behalf of the Federation of Grocers' Associations of the United Kingdom, represent upwards of 150,000 shopkeepers, who are engaged in the distribution of food products to the public. There are amendments to the Adulteration Laws which the trade require affecting articles other than those of purely agricultural produce, and which the Select Committee of 1896 recommended. As, however, the deputation understand, from the announcements which have been made, that the Bill you, sir, on behalf of the Board of Agriculture, propose to bring in will be limited to 'certain articles of food' understood to be agricultural, the deputation respectfully ask your consideration of the subjoined suggestions, and venture to express a hope that they may be included in your Bill. Whilst making these suggestions, they desire to say that they hope you will represent to your colleagues in the Government the urgent need that there is for the full amendment of the Sale of Food and Drugs Acts, 1875 and 1879, in the direction suggested by the Select Committee in their principal recommendations, with the larger proportion of which the trade heartily agree.—We are, sir, on behalf of the Federation, your most obedient servants, W. Findlater, president; R. Corbett Jarvis, chairman of General Purposes Committee; S. Shirley, chairman of Parliamentary Committee; H. Cushen, treasurer; Arthur J. Giles, secretary."

AMENDMENTS SUGGESTED.

(1) To provide that an invoice be a sufficient warranty, as recommended by No. 4 of the Select Committee's recommendations. As the law stands at present a warranty must be an express written warranty intended to be given as such. This operates harshly, and the retail trade hold that if they receive articles from dealers they ought to be entitled to assume they are what they purport to be as described on invoices. This principle has been adopted in the Margarine Act, and ought, we consider, to apply to all other articles as well as butter.

(2) To provide that where the sale of an adulterated article has been made by the fault or error of an assistant, there shall be power to bring him before the Court as the actual offender, the employer in such cases to be exempt on proof that the sale was made without his knowledge or connivance. This principle is contained in the Margarine Act, and is contained in recommendation No. 12 of the Select Committee.

(3) To amend Section 22 of the Act of 1875 by making it compulsory on the Justices of the Court, at the request of either party, to refer articles for analysis to the Somerset House authorities, which course is at present discretionary. This is No. 13 of the Select Committee's recommendations.

(4) To provide for the amendment of Section 10 of the Act of 1879, so that a proper limit shall be made as to the time when summonses shall be issued for all articles, besides merely perishable goods, as now provided. This proposal has been adopted by the Select Committee in its report on page 13. Also to provide that the summons

shall be made returnable in fourteen days, instead of seven days as at present provided.

(5) To provide that the use of the word "Margarine" be a sufficient protection against conviction for the sale of butter mixtures, or to provide that all prosecutions for the sale of such mixtures be taken under the Margarine Act, and not under the Sale of Food and Drugs Acts.

(6) To provide that a copy of the analyst's certificate shall accompany the summons, as set forth in the Government Bill of 1897.

(7) To provide such an improved system of inspection as will cause the law to be more efficiently and systematically administered in all districts. No. 1 of the recommendations of the Select Committee suggests a course that may be adopted for this purpose.

(8) As to the suggestion contained in No. 19 of the Select Committee's report for the establishment of a Court of Reference, it is felt that it would be in every way more satisfactory to enlarge the powers of Somerset House so as to constitute that institution a scientific Court of Appeal rather than set up an entirely new authority.

(9) That No. 10 of the recommendations of the Select Committee "that the division of the sample after purchase, and delivery of a portion to the vendor should be compulsory" be adopted.

(10) That the certificate of any public analyst put forward by a defendant should be prima facie evidence, without the appearance of the said public analyst, just as the certificate of the public analyst put in by the prosecution is accepted by the Court under Section 21 of the 1875 Sale of Food and Drugs Act. At present the defendant is put to unnecessary expense in having to bring into Court the public analyst who gives a certificate on his behalf in case of a dispute as to the analysis of the prosecution.

(11) That provision should be made for the examination of candidates for the post of public analyst, in order that only thoroughly competent persons should fill such important appointments.

MR. JOHN WILLIAMS ON FOOD LEGISLATION.

SPEAKING at Stalybridge on the subject of food legislation, which is now occupying so much attention, Mr. John Williams said there had been a great deal of talk about placing an impediment in the way of the working man's food supply—this applying more particularly to the sale of margarine. He did not wish to say one word as to margarine being a bad article, but after considerable experience he had come to the conclusion that some means ought to be devised whereby it could be sold legitimately—sold for what it was, and not for what it was not. If it were a question of choice, however, he would rather keep company with the honest artisan, and with the farmer of this country, than go with the German or Dutch margarine manufacturers. He thought they as grocers ought to assist the Government in this matter, and show the public that they were desirous of selling a pure article and to do a fair and honest trade, but this would never be accomplished so long as they allowed—as he saw in "The Grocer" of last week—the Margarine Defence Association to say that its members' views were "in accordance with the views of the Federation of Grocers." As regarded mixtures, he had come to the conclusion, after experience covering a very lengthy period, that if they were going to have honesty in the margarine trade they would certainly have to oppose the manufacture of mixtures. So long as mixtures were in vogue, so long would they find someone selling "1s. Kiel," when the genuine article itself cost 116s. per cwt. He did not condemn the persons who were driven into the position of having to sell mixture for butter; force of circumstances made them do it, the alternative being that they would be practically ruined, because it might easily be that they could not compete with their dishonest neighbours. What they desired was that members of associations—as well as associations themselves—should have their businesses conducted on sound foundations. (Hear, hear.) He was in possession of many letters wherein

gentlemen of high standing coincided with his views on this matter, but unfortunately they stated that "circumstances would not allow them to assist him." What he wished to impress upon them was that they should be saved from themselves in this matter, and in order to do this he suggested that margarine should come from the manufactory in such a shape or form that it should not be altered until it got on the consumer's table. He called attention to the fact that a plebiscite had been taken by "The Grocer" on this particular point, and it was very gratifying to him, and also a little surprising, to find that so many members of the trade agreed with the opinions he held. He did not wish that margarine should be placed on the table of the consumer other than in an attractive form. The Danes would not allow it to be sold except in an oval package, and if it was found out of that prescribed package—well, the seller was self-condemned. There were no excuses, such as "washing the counter, sir," or "the ticket had fallen off," etc., nor did they trouble about fines—the authorities just put the offenders on bread and water for a week or so. (Laughter.) Owing to these restrictions it was an exceptional case to find anyone selling margarine for butter in Denmark. If margarine were put up in blocks of various sizes and qualities, and covered with parchment paper in a convenient packet, the trade could handle it with perfect freedom, and it would be a dead certainty, if it were sold in any other form than in that packet, that the trader was perpetrating fraud, and he would have no excuse when he was brought before the magistrates. There had been many objections made against the style of packing he had suggested. One he might mention was that they would make a proprietary article of margarine, but with the word "margarine" only upon the packet that would be impossible. Another was in regard to the distinguishing of the different qualities, but they could do this, say, by attaching labels or wafers of black, green, or red. Then as regarded price, some people thought that it would increase the cost of margarine by 4s. per cwt. But he had an invoice with him from a certain margarine firm where they quoted the price of margarine if put up in rolls, prints, or Irish lumps, at 2s. per cwt. extra. If they could sell prints at that price, it would be even easier and cheaper to put them up in square blocks. The margarine manufacturers of course did not want their business methods altered or upset—nobody cared to have their business disturbed—but he had been told by margarine manufacturers themselves that the article would be produced as cheaply in the block packets as it was at the present time, if not cheaper; because now they had to keep different packages to meet the various requirements of the trade in the different parts of the country, whereas there would be but one. The next objection was that packaging would not stop fraud, as anybody could knock the blocks together and sell it as butter. But when a man was undoing the packets and knocking them together his conscience would dictate to him that he was a thorough rogue, and he would also know that the authorities would certainly have better facilities for getting at him than they had at the present time. He honestly believed that there were thousands of young fellows who were regularly induced to sell margarine for what it was not, under the present regulations; whereas they would hesitate to deliberately knock blocks of margarine into firkin form and sell it for something else. There was another objection, and that was that margarine would not keep if wrapped up as suggested; but he considered that this point was exaggerated, and that the objection was not valid. In conclusion, he wished the members of the Stalybridge Association every possible success, and hoped that before long they would have a very powerful and strong organisation.

ADULTERATION IN BIRMINGHAM.

DR. ALFRED HILL, public analyst, reports: "During the past three months 363 samples of food, drink, and drugs were submitted to me for analysis by Mr. Jones, and

two samples by Mr. Parker. Fourteen samples were taken under the provisions of the Margarine Act, and 351 under the Sale of Food and Drugs Act. Of the latter 32 samples, or 9 per cent., were adulterated with preservatives only, and 28 samples, or 8 per cent., were adulterated in other ways.

"The articles analysed were: Milk 141, butter 127, coffee 39, self-raising flour 14, white pepper 9, Irish whisky 6, root ginger 5, Demerara sugar 5, Scotch whisky 3, ground rice 1, prescription (pills) 1, margarine 14.

"Milk.—Nine samples contained an excess of water, two were deficient in fat, and two others were both skimmed and watered; the total being thirteen samples, or 9 per cent. In the corresponding quarter of last year 14 per cent. were adulterated in these ways. Boric acid was present in six samples, one being also adulterated with water, and eight samples contained formic aldehyde, two of the samples were adulterated with both preservatives. Thirteen samples, or 9 per cent., were condemned because of the presence of boric acid and formic aldehyde, against 8 per cent. in the corresponding quarter of last year. Eleven other samples were of low quality.

"Sample No. 1,046 was sold as 'skimmed milk,' but analysis showed that it had not been skimmed, but that it had been adulterated with 35 per cent. of water.

"Butter.—Of the one hundred and twenty-seven samples analysed four were adulterated with foreign fat and boric acid, two with foreign fat only, and nineteen with boric acid only, the total number of adulterated samples being twenty-five, or 19 per cent., a very similar proportion of adulteration to that of the two preceding quarters.

"Margarine Act.—Fourteen prosecutions were instituted last quarter for samples of margarine not being labelled. Samples Nos. 919-922 were obtained from one manufacturer. He was also fined £2 and 8s. costs for making margarine without his factory being registered. Samples Nos. 914 and 918 were obtained from two of his customers. Boric acid was present in twelve of the fourteen samples examined.

"Self-Raising Flour.—Five of the fourteen samples received were adulterated with maize flour; two of the vendors were cautioned by the Health Sub-Committee; in two other cases action has not yet been taken.

"Coffee.—Four of the thirty-nine samples of coffee examined last quarter were adulterated with chicory.

"Prescription.—Pills.—The sample of pills received containing arsenic and dried sulphate of iron was not altogether satisfactory, as there was a slight deficiency of iron and the pills were not so uniformly divided as I consider carefully dispensed pills should be.

"Other Articles.—Nine samples of white pepper, six of Irish whisky, five each of root ginger and Demerara sugar, three of Scotch whisky, and the single sample of ground rice were all found to be genuine.

"The average fine inflicted under the Sale of Food and Drugs Acts was £2 16s. 7d., and under the Margarine Act £7 8s. 5d. The legal costs paid by the vendors amounted to £13 9s. 6d.

CORRESPONDENCE.

MILK ADULTERATION.

To the Editor of FOOD AND SANITATION.

SIR,—An impression seems to be somewhat widely spread that in times of drought cows give poorer milk than under normal conditions. I shall be obliged if any of your subscribers can inform me whether there is any, and what, authority for the proposition, and also whether the inferiority shows itself in a decrease of the fatty solids or the non-fatty solids?—I am, sir, yours faithfully,

RALPH SIMEY,

Clerk of the County Council.

"Shire Hall, Durham, 11th February, 1899.

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Food and Sanitation.

SATURDAY, MARCH 4TH, 1899.

SPECIAL NOTICE.

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BEER BARRELS AS MEASURES.

By G. H. CROXDEN POWELL.

I DESIRE to bring to the notice of the country a matter of very great importance to a large section of the community, both trades and private persons, viz., the necessity of testing the capacity of certain casks used for the sale of beers, either on delivery to the purchaser or immediately after, and before being broken, by competent persons, and in the presence of witnesses when casks appear to be too small and when they are not properly filled.

I regret that any doubt exists in the official mind on the point as to whether beer casks are measures, but doubts, like weeds, will grow up and take the entire space intended for better crops, if we do not energetically keep them down. There is nothing in the *Pilgrim's Progress* which so nicely fits in to the present condition of the Board of Trade, or that better describes it, than its "Doubting Castle." Official density and official doubts are calculated to make an official quandary equal to the most eminent quagmire, nay, a veritable swamp, and the "spawning ground" of ingenious doubts, from which local officials can be supplied with that commodity, cheaply, expeditiously.

So grave is the doubt on the official mind as to whether beer barrels or casks are measures or not, whether they ought to be tested or not under the Weights and Measures Act, 1878, that the Department has not been able to resist the accumulating force of its own doubts, that in sheer despair it has surrendered, and decided that beer casks are not measures under the Act unless they bear a mark stating their contents. So that the imperial dictum now is—that a 36 gallon cask, by law and consent a *barrel*, is not a barrel until you have branded in the wood the figures "36," then it is officially a measure under the Act, and, as such, is liable to be examined by an inspector under the Act of 1878; but as these casks are only so marked in one case per 10,000, the 9,999 are declared to be free from test and inspection. At this rate of calculation, those who are disposed to be greedy and least honest have a splendid opening given them for a mighty haul in using casks a few gallons short in capacity and not filled.

Just imagine a great horse or cattle-dealer going to a Fair, and among the thousands of animals he sees around him he denied that there were either horses or cattle, because none of them were labelled "This is a horse," "This is a cow," or "The ass." The Board of Trade is that horse or cattle dealer.

The Board has gone far beyond this in this controversy. It has discovered that Section 22 of the Act of 1868 is the section by which beer casks which are not labelled "This is a kilderkin," or "This is a firkin," "This is a hogshead," or "This is a butt," may be effectively got rid of. It has also discovered—as the Weights and Measures Acts do not apply to the unmarked remnant of 35,000,000 of barrels of beer consumed in this country in a year—that prosecutions for shortage in this flood of liquor can best be taken under a "dry goods" Act, viz., the Merchandise Marks Act, 1887.

So "cocksure" is the Board on this point that it emphasises its assertion by two ample proofs. There is no doubt in Doubting Castle on this point. It was done in the *Budd v. Lucas* case. It was done in the case at Gateshead so far back as 1894. In the former the High Court decided that the local justices had done quite right in convicting the defendant brewers, under the Merchandise Marks Act, for "a false trade description," viz., invoicing a barrel of ale as a 36, when it was only of a capacity to hold 34. But the Board of Trade, when inoculating the Warwickshire County Council with its own disorders and doubts, could not see that they were giving the very best possible illustration that a barrel—that was not marked "36"—was a measure, and the local justices and the High Court said so by their conviction in the lower, and their approval in the higher court. But the Board of Trade does not apparently see this.

In November, 1894, the Warwickshire County Council prepared a circular calling on all brewers in that county to have their casks—"used as measures in trade"—verified and stamped by an Inspector of the Council under the Weights and Measures Act, 1878. The Council were so advised by the Board of Trade; but the Board of Trade is fickle, for on January 26th, 1895, they wrote their famous letter to Warwickshire, and said of this circular: "It will be apparent that if it were now thought fit to circulate any such notice, its terms would require considerable modification to bring them into accord with the views of the Board of Trade as stated in their letter of June 16th last."

PURE, WHOLESOME, DELICIOUS.

BIRD'S CUSTARD POWDER

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successful Housekeeper.

NO EGGS! NO TROUBLE! NO RISK

This letter of the Board has been printed and circulated among the Inspectors of Weights and Measures, who also have been inoculated by the Board's doubts, so where it was a part of their duty to test beer barrels their duty has been mostly observed in the breach. The clerks of County Councils and of City and Borough Councils have been, to a considerable extent, smitten with this "How not to do it" legal opinion? The committees, too, of local authorities have not escaped the Whitehall plague. Many of these committees treat their inspectors—who should be always on the look-out for such defaulting casks—very much like dogs at the Waterloo cup. They keep them "leashed" while the hare gets a chance of escaping. (Here that parallel ends.)

The Board of Trade have been, so they say, advised that there is some doubt as to "the real intention of the Legislature" as to these casks being measures. But the Board of Trade has proved only its own incompetence to safeguard the public on these matters; for when the department charged to watch over the working of weights and measures of the country can isolate—at its own sweet will—the measures used by a great and wealthy trade, while it compels from the poorer retailer the most scrupulous exactness, it is clear that impartiality has no place in the administration of this department.

For over twenty years the Board has failed in its plain duty, it has first failed to understand the law it had to see carried out, it has allowed fraudulent business to be carried on unchecked, then with an audacity, both cool and plausible asserts that there has been "no general demand" by the public, or on the part of the local authorities, for its reconsideration—that is, the "neglect" which has been going on for twenty years, a somewhat peculiar position for a public department to assume when charged to carry out the expressed will of the country, contained in an Act which has been law for centuries; for the present Act is a Consolidating Act, and embodies all the laws of the past against fraud on the people in this direction, and while the fraud lasts the law lasts, and was intended to be carried out. The people are under the soft delusion that the law is being carried out by those it pays and expects to do their duty—whether imperial or local—but they are vastly mistaken in thinking so.

What is wanted in that Augean stable in Whitehall Gardens is a new broom and a clean sweep. The assumption of its officials is amazing, to take upon themselves to say what part of an Act of Parliament shall be put in force and which shall not without the knowledge, consent, or authority of Parliament is an unusually large order; and if the House of Commons has abandoned its authority over this department, a new and more effective method must be found by the people to meet such outrageous conduct. "Stop the supplies" is an old constitutional precept, and it has rarely ever failed, and might in this case work an improvement. The magnitude of the injury done to the public and private buyers of beers may be imagined when it is estimated that the worst and most unscrupulous sort of

brewers take, by means of barrels which have been diminished time after time and by not filling their casks, some £2,000,000 per year beyond and above ample and good business profits. There are many such plungers among brewers, who are not only the enemies of the public, but equally so in their own trade against the best and most honest brewers we have amongst us.

The Board of Trade having thus to its own satisfaction disposed of the work of testing barrels, under the Weights and Measures Act, 1878, by magnifying difficulties of procedure, and by the alarming invention that new standards would be required, and, more terrible still, an order in Council. This prospect was to cap the other delusions of the Board, and to terrify the bucolic mind with the disturbance of the constitution which would follow any attempt to disturb the slumbering of the Board of Trade officials. No such thing is required, neither orders in Council, new standards, nor new law; the old law is ample. The Merchandise Marks Act, which can be used for this purpose, is not needed. 41 & 42 Vict. c. 49 and 52 & 53 Vict. c. 21 are ample for every purpose, and if applied with the same energy against dishonest brewers as against other trades would soon root out the fraudulent barrels, and do an act of justice to purchasers.

There is no particle of doubt among brewers that the barrels they use are measures. The retailers and private buyers are equally satisfied that barrels are measures; the justices in sessions who have tried the four last cases against brewers, and convicted and fined them, agreed that barrels were measures; they are held out and offered to the public in price lists, in advertisements, and by agents as measures. The whole trade of the country, both home and export, is done on that basis. The buyer relies on ancient custom and the offer of brewers and dealers. Vessels for beer were expressly declared by Act of Parliament to be made and assessed and used at stated contents of which the *barrel* was the denominator, and the standard gallon the unit and proper measure. That Act was 23 Hen. VIII. c. 4, which was not finally repealed in England until 1863. For Excise duties, the Act of 5 Geo. IV. c. 54, s. 17, declared a barrel to be thirty-six gallons. It also declared that a firkin of nine gallons should be used by brewers for certain sales, and in another case of the kind a four and a half gallon cask should be used. The kilderkin is a half-barrel, and the multiples beyond the barrel are regular increases of that measure. On the establishment of the barrel the 14th section of the 43 Geo. III. c. 69 (1803), was plain:

"That no beer or ale brewed by the common brewers in Great Britain shall be sold by such common brewers at any other rate or quantity for *the barrel* than the aforesaid quantity of 36 gallons; any law, practice or usage to the contrary notwithstanding." The statute of 1531 insisted that each class of cask should "hold and contain" the stipulated number of gallons of the beer or ale sold, *or else over and not under*. If you go to the several service stores and get their beer lists, you will see that the price is quoted for known public measures, which is agreed between buyer and seller to be the quantity intended between them.

As I have quoted from the Board of Trade letter that the department holds out as a terrifying reminder that new standards would be required and an order in Council to enforce them, this is a preposterous and thoughtless assertion. The standard gallon is the unit of measure for all liquids, and all parts of the gallon and all multiples of it are to be derived from it, and all measures to be compared with it. If the Board will read Sect. 15 of 41 & 42 Vict., c. 49, they will find the unit there stated, and in the second paragraph it further says, "The quart shall be one-fourth part of the gallon, and the pint shall be one-eighth part of the gallon." In the Second Schedule it is recited that the following are the measures in use under the Board of Trade: "Gallon, half-gallon, quart, pint, half-pint, gill, half-gill, quarter-gill."

These it will be seen descend from the gallon, so that if the gallon is to be abandoned for the larger duty of checking beer casks it must follow that it cannot be used for

testing the smaller measures above named. As a footnote to the above schedule is the following: "Note.—The brass gallon marked 'Imperial standard gallon Anno Domini MDCCCXXIV, Anno V Geo. IV Regis,' which has a diameter equal to its height, and was made in pursuance of 5 Geo. IV. c. 74, s. 6, and is at the passing of this Act in the custody of the Warder of the Standards, shall be deemed to be a board of Trade standard for the gallon."

Now if that Act was good enough to construct a standard gallon and to declare it the unit of standard measure of capacity in Sect. 15 of the Act of 1878, that same Act must also be taken in reference to this measure in the uses to which it was to be applied. It is given in the very section that established the standard gallon, and says, that this brass measure "is hereby declared the unit and only standard measure of capacity, from which all other measures of capacity to be used, as well for wine, beer, ale, spirits, and all sorts of liquids—as for dry goods not measured by heaped measure—shall be derived, computed, and ascertained; and that all measures shall be taken in parts or multiples, or certain proportions of the said imperial standard gallon, and that the quart shall be the fourth part of such standard gallon, and the pint shall be one eighth of such standard gallon."

Yet one more extract from that Act. "Sect. 14. That in all cases of dispute respecting the correctness of any measure of capacity, arising in a place where recourse cannot be conveniently had to any of the aforesaid verified copies or models of the standard measure of capacity, or parts or multiples of the same, it shall and may be lawful to and for any justice of the peace or magistrate having jurisdiction in such place to ascertain the content of such measure of capacity by direct reference to the weight of pure or rain water which such measure is capable of containing; 10 lbs. avoirdupois weight of such water, at a temperature of 62° Fahr. Ther., being the standard gallon ascertained by this Act, the same being in bulk equal to 277 cubic inches, and $\frac{274}{1000}$ th parts of a cubic inch, and so on in proportion for all multiples of a gallon" (Burn's *Justice of the Peace*, Ed. 1869, vol. v., p. 1207).

These powers are embodied in the Act of 1878, which is the legal successive authority to the Act just quoted, and parts of that Act are repealed by the later Act in the Sixth Schedule.

Another Act subsequently established—1835—the main powers of which are transferred similarly to the Act of 1878, is the 5 & 6 William IV. c. 63, and Sect. 21 has a word to say about the exemptions referred to in Sect. 22 of the more recent Act. There it is stated that exemptions are wooden and wicker lime measures, or other articles of like nature, or any glass or earthenware jug or drinking cup; brewers' casks are not named. The general and large adoption of glasses of various sizes and shapes for sale of beers, wines and spirits between that date and 1878 made it necessary to watch the consolidation of this Bill by retailers, and when they discovered in the reading of the Bill that these glasses were to be brought within its scope, they protested by their organisation, and pointed out to Mr. Stanhope the difficulties of stamping all such glasses, and the great loss the trade would suffer by having to buy new measures throughout, and by their legal adviser had prepared a form of words to embody in the section which met their very reasonable requirements; those words stand part of the Act in Sect. 22, and neither in conception, discussion, or in drafting that section did the barrels used by brewers ever have a thought. Only the odd vessels of retailers—cans, jars, jugs, pails, glasses and bottles—ever were thought of in this respect, or intended, and how the Board of Trade could ever drag barrels into that section for exemption passes the wit of man to understand.

In the cases of conviction in Courts of Summary Jurisdiction provided in the Act, the justices in every case tried since the Board of Trade issued the Warwick letter found that barrels were measures under the Act of 1878, in direct opposition to the view of the department, and in each case convicted the defaulters. As men of common-sense they could not do otherwise. The Act is clear

enough to ordinary persons, as the traditional right and custom are strong and remembered. To pass a law to have effect through the United Kingdom against all persons being traders, carriers, dealers, and otherwise, to check fraud on the public, was thought necessary by Parliament, and it was never in contemplation that the very department empowered to see the Acts carried out would do directly the opposite with a large section of measures used in wholesale, and give the dishonest members of that trade *carte blanche* to pursue their fraudulent and illicit gains by means of defective measures used to the detriment and loss of a vast body of the Queen's subjects.

WHISKEY.

At Kensington Petty Sessions, on February 21st, William H. Cullen, grocer, 121, Warwick road, Kensington W., was summoned for selling Irish whiskey 33·7 per cent. under proof. Inspector Ellenden produced the bottle which was labelled "superior old Irish whiskey," and in the corner in very small letters, "35 u.p." The Inspector said that although he knew what the letters "u.p." meant the general public might not. Mr. Beck, solicitor for the defence, said there could be no suggestion of fraud in this case. The bottle was labelled "35 u.p." whereas the analyst's certificate only showed 33·7 under proof. He considered the disclosure on the label was quite sufficient under Section 8 of the Food and Drugs Act. The defendant had forty or fifty shops in the metropolis, and this was the first imputation that had ever been made against him. The Bench did not consider there had been sufficient disclosure to the ordinary public. They recognised that it was done against Mr. Cullen's wishes by one of his managers in neglecting to point out to the purchaser that it was under proof. Mr. Beck hoped the bench would not convict owing to a manager's carelessness. He suggested the case might be met by payment of costs without going to the extent of a conviction. The Chairman said defendant must suffer for his manager's carelessness. A fine of £5 and 10s. 6d. costs was imposed.

EXTRAORDINARY EVIDENCE IN A MILK CASE.

At the Sunderland Police Court, Mr. James M'Laren, Offerton Hall Farm, was summoned at the instance of the Corporation Health Department, for an offence under the Food and Drugs Act, by selling milk from which fat had been abstracted. The Town Clerk, in opening the case, said that Mr. M'Laren was charged with having, on December 14th, unlawfully sold to the Sunderland Equitable Industrial Society an article of food, viz., milk, from which 37·46 per cent. of fat had been abstracted, without making disclosure of such alteration or abstraction to the Society. He regretted very much that it was his unpleasant duty to have to prosecute a gentleman of Mr. M'Laren's reputation on such a charge. The facts of the matter were but very short. On the morning of December 14th certain carts belonging to Mr. M'Laren were at the Co-operative Society's premises in Co-operative Terrace. Barrels belonging to the Society were upon the cart, and were filled with milk, which was delivered to the Society. Two of the Corporation inspectors went and asked for samples of milk, for which they paid. Four samples were procured, and the intention to have them analysed having been stated, the samples were forwarded to the analyst, Mr. Pattinson, of Newcastle. The certificate of Mr. Pattinson, in respect to the sample with which the Court was now dealing, was that the amount of non-fatty solids was 9·08 per cent., the fat 1·72, water 89·20, and that 37·46 per cent. of fat had been abstracted from the sample, and this opinion was based upon the fact that the sample contained but 1·72 of fat, whereas normal milk had at least 2·75. The second sample contained 9·14 non-fatty solids, 2·04 of fat, 88·82 of water, and from it 25·82 per cent. of fat had been abstracted. There was a point on which the Courts had gone so far as to lay it down that where a quantity of milk was being sold and was in one large vessel, and where the vessel not being kept turned, the cream was allowed to accumulate on

the top, so that the earlier buyers got the best and the late buyers got the worst. There was a prosecution in such a case, and it was held that even such a case as that came within the section of the Act, although there was no guilty intent.—John Pattinson, the analyst of the milk in question, stated that he had been an analyst for thirty-five years at Newcastle. He received samples of milk numbered 74, 75, 76, and 77, from one of the inspectors, and the analysis given was the result of the analysis of 76 and 77. Of the latter, 37.46 per cent. of fat had, in his opinion, been abstracted, which he based on the fact that the sample had only 1.72 per cent. of fat, whereas normal milk contained at least 2.75. That was a very low standard, but it was the one Somerset House based on the analysis of the milk of 272 cows. They had also analysed milk of 55 herds of cows, and for these the average amount of fat yielded was 3.97, nearly 4 per cent. If the milk in question had been judged by that standard, instead of the deficiency being 37.46, it would have shown more than 50 per cent. deficiency. He had taken the quantity of fat that should be present at 2.75 per cent.; whereas the test had given an average amount of 3.97 in the case that he had mentioned. And further, the Aylesbury Dairy Company had in eleven years had 120,000 samples analysed, which gave an average of fat of 4.1. He mentioned this to show that the standard by which he had judged the milk was very low. He knew of no circumstances under which genuine milk taken from a cow contained less than 2.3 per cent. He thought it was extremely unlikely—a thousand chances to one—that cows themselves would give such a quality of milk. If the cows had had an imperfect meal they might yield a small amount of fat, but that was not a fair sample. The only case where a cow yielded milk with less than 2.3 per cent. of fat was one sample taken from a cow which had been long standing in a market, and the fore milk drawn off showed 1.5 per cent. of fat.—Cross-examined by Mr. Scott-Fox: Seeing that the milk was carried three or four miles, was there any possibility of it not being a genuine sample because it was taken from a tap at the bottom of the barrel? Whether or not, the analysis was that of the sample.—Mr. Scott-Fox pointed to the journal of the British Dairy Farmers' Association, in which a table showed that a cow had given milk containing 1.89 per cent. of fat, and other animals yielded 1.98 and 2.12 per cent. of fat from the morning milk.—Mr. Pattinson said those figures had been called into question by the president of the Society of Public Analysts, and a great deal of doubt was thrown on their accuracy. There were cases of cows which were not in good health, or of poor breed or food, which gave less.—You agree that these cows would not give as much fat as Jersey or Guernsey cattle? That is so. The latter give 8 or 9 per cent.—If a cow were milked at 6.30 in the morning and 2 o'clock in the afternoon, being eight hours and sixteen hours between the milkings, would it not be a fact that the morning milking, although larger, would be less rich? Yes; but not very much.—Your suggestion that Mr. M'Laren must have abstracted the fat depends upon whether the samples you got were fair samples as delivered by the cows? Yes.—Have you ever made an experiment yourself, or heard of anyone else doing so, as to what would happen if a full can of milk were taken four miles on a winter's morning to the town within two hours of milking—such an experiment as would show any rising of the cream in that time so as to make the upper half of the milk richer than the bottom? Although the cream rises, I should not expect any material difference in two or three hours in a barrel carried in a cart and shaken.—Mr. Scott-Fox: We made that experiment yesterday morning. We took milk from five or six cows, filled the cans in the presence of Mr. Ranken, and it was brought down in the cart to the same spot. Samples were taken before they left the farm, as delivered by the cows, and an analysis was made. Then other samples were taken from the top and bottom of the barrel. Is that a fair experiment? Yes.—If Mr. Ranken found that the fat on the milk when taken at the farm was 2.80, that from the bottom of the barrel it was 1.74, and that from the top it was 3.63—that was a fair experiment?

Yes, if correctly recorded; but it was a low percentage of fat to begin with.—Having heard that you do not think that it would be a very improper conclusion to come to, to say that the whole of the milk in the barrel was of the same fatty richness as the bottom pint? Yes; it would not be fair after that experiment.—Subject to that experiment being proved, if samples submitted as representing the bulk of the milk were taken from the bottom of the cask, the conclusions are not to be relied on?—No; my result only applies to the pint of milk.—After a good deal of discussion between counsel, Mr. Scott-Fox said he would call evidence to show that the milk was put in the barrels as it was taken from the cow, and that nothing was abstracted, neither was any skim milk added; and also that the cream tended to rise to the top of the barrel during transit, despite the vibration.—Jane Anne Collins, milkmaid, said she was at the Village Farm on December 14th, and saw the milking, and the milk was put into the barrels as it came from the cows.—Cross-examined: She did not know what taking "tops" meant, nor that it meant taking half the milk from the first cow. All their cows were milked clean out. She did not know what the "strippings" of the milk were, and did not know that strippings were richer in cream than the milk previously taken. She did not know if that practice were resorted to, but she knew that their cows were always milked clean.—Herbert Vasey, who superintended the milking at the Village Farm, also gave evidence.—Cross-examined: He had never heard that "strippings" were taken to get a richer cream for the purpose of making butter, but had seen it done to keep the cows in order.—Do you know about "taking tops"? What's that, then?—Other evidence to the same effect was led.—William Somerville, C.E.Sc., B.Sc., Professor at the Durham College of Science, said it was his duty to give instruction in matters affecting agricultural and dairy work, and in his experience there was a considerable difference in the morning and the afternoon milk. If there was eight hours between, from the morning milking to the afternoon milking, and sixteen hours from the afternoon milking to the next morning's milking, he would expect the morning milk poorer than usual. The longer the term the poorer the milk would be. He would expect a great difference in the top and bottom layers of milk in the barrels in spite of the transit, and the milk taken from the bottom would not be found a fair sample of the contents of the whole barrel nor indication that there had been any abstraction or diminution of fat. One of the principles of cream separators was that cold water was put round the milk in order to make the cream rise quickly, and the cold water would do the same thing with the milk in these barrels, especially if they were so full that there was no cavity to allow for a deal of agitation. If they were full up to the bung there would be no mixing of the milk. To take a sample of milk properly the liquid should be poured from one barrel to another several times and samples of various layers taken. It was not unusual in morning milk to find but 2 per cent. of butter fat.—Cross-examined by the Town Clerk, witness said possibilities were enormously against the fat being so low as the sample, but, under the circumstances, he thought it possible, especially as some of the barrels had stood a long time while the others were being filled—more than an hour—and this, coupled with the fact that they were filled to the bung, would be sufficient to cause the poverty of a sample which was taken from the bottom of the barrel. He agreed that 2.75 was the minimum standard.—Chas. Ranken, analyst, Sunderland, said he went to Mr. M'Laren's Village Farm, and took samples of milk put into barrels for the Co-operative Store just after the cows were milked. The milk was not tampered with, and stood in the barrel until the other was ready—about two hours—and then taken to the Society's premises in Co-operative Terrace. Then he took a sample from the top of the barrel, and another from the tap at the bottom. In that taken from the bottom he found 1.74 of fat, and in that taken from the top 3.63. The analysis of the milk taken at the farm had not been completed yet, but he had so far obtained 2.8 of fat from it.—Cross-examined: Witness said

he did not think the 2·8 was, in his experience, exceptionally low. After he took his sample at the farm, the barrel was left full.—The Magistrates then retired, and, after a consultation lasting about ten minutes, returned. The Chairman said they had given the case very careful consideration. There was no evidence that the fat had been abstracted, and they would dismiss the case.—There was a second charge of a similar nature on the list against Mr. M'Laren, but it was not proceeded with.

MILK AND DIPHTHERIA.

A MILK CASE affecting the public health was heard at Caerphilly Police Court on February 21st. Lock John, Parknewydd Farm, Senghenydd, was summoned, at the instance of the Caerphilly District Council, "for being the person in possession of milk who exposed it for sale, it being unwholesome." Mr. William Spickett, solicitor, and clerk to the council, prosecuted, and Mr. George David, solicitor, Cardiff, defended.—In opening the case Mr. Spickett pointed out that there had been 39 cases of diphtheria at Senghenydd, and in 31 of these cases the milk had been supplied by the defendant.—Mr. Thomas Powell, L.C.V.S., county bacteriologist, said he found germs in the sample of the milk submitted to him which were morphologically undistinguishable from diphtheria germs.—Mr. David: Did you find diphtheria germs?—No; but I found germs which were morphologically undistinguishable from diphtheria germs. (Laughter.)—Mr. David, in addressing the Bench for the defence, raised a point of law. He said that the prosecution, in order to obtain a conviction, should prove that the defendant acknowledged that the milk was unwholesome, or that he had not exercised reasonable precaution in carrying on his business. He thought that they could not prove that the diphtheria was caused by the milk the defendant sold. Instead of thirty-one cases suggested, and which had not been proved, there were only four cases in the houses served by the defendant, and there the drains had been condemned. The probability was, that the diphtheria had been caused by "bad drains."—The defendant then gave evidence, and said he had no knowledge that there was anything wrong with the milk. There were five other persons selling milk at Senghenydd, and there were cases of sickness at houses which he was not supplying with his milk. Replying to Mr. Spickett, he said he supplied milk to thirteen houses where diphtheria existed. Four of these cases had proved fatal.—After a long retirement, the magistrates fined defendant £2 and costs, and warned him that if a similar thing occurred the fine would be heavier.

ADULTERATED MILK.—A NEW DEFENCE.

At the Leeds Police Court William Thorpe, farmer, of Ochre House, Whitehall Road, Farnley, was summoned for selling milk which contained $7\frac{1}{2}$ per cent. of added water. The Deputy Town Clerk prosecuted, and Mr. A. Willey, who represented the defendant, said, after evidence had been given, that his client had done everything in his power to protect his customers, and to secure pure milk. He said that the quality of the milk was due to the poor water supply, and to the low condition of some of the animals in consequence.—Whilst accepting the view that there was no personal attempt to defraud his customers by the defendant, the Stipendiary Magistrate said he could not hold, considering the analysis, that there was no added water in the milk. There was a previous conviction against the defendant, who was fined £3 and costs, the Stipendiary Magistrate remarking that if he had believed the defendant to be personally guilty the fine would have been at least £10.

SENSIBLE FINES IN ABERDEEN.

BEFORE Sheriff Burnet, in Aberdeen Sheriff Court on Feb. 23rd, James Anderson, Portland Street, was charged, at the instance of Mr. Kenneth Cameron, with selling 3d.

worth of sweet milk which was deficient in cream or fat to the extent of twenty-five per cent. He pleaded guilty, and Mr. Morrison (Davidson and Garden) made a statement in mitigation, which was to the effect that accused sold the milk as he received it. It was also pleaded that when milk was kept standing a certain natural deterioration was bound to follow.

For the prosecution, Mr. Robert Lamb said the only deterioration that could take place would be due to skimming.

The Sheriff said this complaint practically meant that the public were being cheated to the extent of 15s in the £. It was a very serious offence, and he was willing to believe that accused committed the act without that intention which the law required. Accused must, however, pay £5, or go to prison for seven days. He was allowed fourteen days to pay.

William Keith, Head Croft Place, Aberdeen, was charged with selling, in premises in Gordon Street, 3d. worth of sweet milk which had a deficiency of cream or fat to the extent of 53 per cent., and an excess of eight per cent. of water. Mr. H. F. Campbell made a statement on accused's behalf, contending that it was a purely technical offence, and that, as a matter of fact, accused had really nothing to do with it. Moreover, a mistake had been made on the part of the person selling the milk, who supplied skimmed milk instead of sweet. Mr. Lamb said this was a common excuse after the offence had been found out. The Sheriff said this was a very gross breach of an Act intended for the preservation of an article of food we all used. We could not afford to have it adulterated, and the law took it under special protection. In this case the penalty would be £10, fourteen days being given to pay.

SMALL FINES AT LIVERPOOL.

At Liverpool, on February 22nd, Richard Goth, of 17, Eyes Street, was fined 40s. and costs for selling milk containing 2·44 per cent. of fat, 8·91 per cent. of other fats, and the milk was deprived of part of its cream.—Newton Swain, of 95, Granton Road, was fined £3 and costs. Mr. Rudd defended. The milk in this case had been deprived of a part of its cream, and the percentage of fat was 2·43. The defence was that the milk had been sold in the same condition as it was when defendant got it.—The next charge was against E. Halstead for selling milk containing 0·42 per cent. of fat, and 8·25 per cent. of other solids. Upwards of nine parts of water had been added to every hundred parts of separated milk. A fine of £5 and costs was imposed.—Inspector Quinton proved each case, and there were three previous convictions against Halstead, and four against Swain.

Surely these previous convictions merited the full penalty. The fines inflicted are no deterrent.

MARGARINE AS BUTTER.

At Salford Police Court, on February 22nd, Louis Grange, wholesale and retail provision dealer, of Oldfield Road, Salford, was summoned for selling margarine as butter, and further for selling margarine not properly labelled. Elizabeth Hennis, retail provision dealer, of Liverpool Street, Pendleton, was also charged with selling margarine as butter.—Mr. L. C. Evans conducted the prosecution, and Mr. F. O. S. Leak appeared for Grange.—Inspector Crossley, who proved the cases, stated that, having purchased a sample of butter from Hennis, which upon analysis was found to be margarine, he watched the shop. On the 27th ult. he made a purchase from a boy in the employ of Grange, who was delivering butter at the shop of Hennis. He bought three-quarters of a pound, and paid 10½d., and this, upon analysis, was found to be margarine, containing over 50 per cent. of foreign fat.—Hennis now stated that she purchased the article as butter, and paid 11d. per lb. for it. On the invoice it was stated to be butter.—Questioned by Mr. Leak, Hennis stated that the defendant Grange might have told her that on account of

butter being so dear he could not sell it at 11d., and he might also have said something about a mixture.—Mr. Leak contended that Grange sold the article to Hennis as a mixture, but he had, unfortunately, overlooked invoicing it as such.—Mr. Evans said that this was the second offence against Grange, and the stipendiary imposed a fine of £20 and costs. Hennis was ordered to pay 5s. and costs.

At South-west London, on February 23rd. Thomas Edwards, of 34, York Road, Battersea, William Hawkes, of 39, Winstanley Road, and Charles James Flack, of 306, Battersea Park Road, were summoned for offences under the Margarine Act.—Mr. W. W. Young prosecuted for the vestry of St. Mary, Battersea.—The evidence was identical in each case—the vestry's inspector asked for butter, and was served with a mixture of margarine. In the case of Edwards the substance contained 87 per cent. of margarine, 95 per cent. in the second case, and 83 per cent. in the third. Mr. Edwards urged in his defence that his shop was in charge of a manager, who on the day of the inspector's visit was in a state of intoxication; Hawkes stated that he had dismissed his servant, who was responsible for the sale; and Flack pleaded that he gave his shopmen strict instructions to inform customers that the butter was not pure.—The magistrate observed that in any case the profits went into the pockets of the master and not the servant. He viewed the offences as a serious fraud on the public, and imposed a penalty in each case of £15, with 12s. 6d. costs.—The defendants seemed surprised at the amount of the fine.

YORKSHIRE RELISH.

In the action of Powell v. May & Co., Mr. Sebastian applied to Mr. Justice Kekewich, in the High Court, on February 24th, for an injunction restraining defendants from committing what he described as a glaring infringement of the well-known label "Yorkshire Relish." The defendants did not appear, and, therefore, all he had to do was to satisfy the court that he was entitled to what he asked. His lordship said he thought he could take judicial notice that "Yorkshire Relish" belonged to the plaintiff. Mr. Sebastian said he should like his lordship to see the two labels, which were handed up. There was no distinction in the bottles, which were common to the sauce trade; but the labels, with the exception of the colour in certain places being transposed, were identical. To make matters worse, the defendants had added insult to injury by pretending to be the first to use this particular label. He asked for an injunction restraining defendants from in any manner using or applying the words "Yorkshire Sauce" or "Yorkshire Relish" as descriptive of or in connection with, or in respect of, any sauce or relish manufactured by them, or not manufactured by the plaintiff, without clearly distinguishing such sauce or relish from the sauce or relish of the plaintiff; and from describing any such sauce or relish as aforesaid as the original Yorkshire sauce or relish; and from selling, offering, or exposing for sale, or advertising, or procuring to be sold, any such sauce or relish as aforesaid under labels or wrappers or enclosures, or otherwise calculated to represent or lead to the belief that such sauce or relish was the sauce or relish of the plaintiff; and from selling or supplying any such sauce or relish as aforesaid in response to orders for "Yorkshire Relish," or the sauce of the plaintiff; and from in any manner passing off, or assisting, or enabling others to pass off, such sauce as and for the sauce of the plaintiff. His lordship said it was a rather elaborate form of injunction. Mr. Sebastian replied that it was to meet an unusual and elaborate fraud. His lordship granted an injunction in the terms asked.

FISH AS FOOD.

FROM recent data collected by the United States Fish Commission, it appears that more than 616,000,000 pounds of fish, crustaceans, etc., are annually taken from the waters of the New England States; over 596,000,000 pounds from the Middle Atlantic States; over 59,000,000

from the South Atlantic States; 84,000,000 from the Gulf states; 147,000,000 from the Pacific States; and 64,000,000 from Alaska. The products of the fisheries of the Great Lakes exceed 108,000,000 pounds annually, and the interior fisheries, 19,000,000 pounds. In this classification the interior fisheries of Vermont are included with those of New England, the fisheries of New York and Pennsylvania on the Great Lakes with those of the Middle Atlantic States, and the fisheries of the east coast of Florida with those of the Gulf States. The data for the Great Lakes embrace only those States not having coast fisheries, but include the fisheries of the Ohio River for Ohio, Indiana, and Illinois. The figures for the interior States are confined to States not having coast or Great Lake fisheries. In addition, thousands of pounds of fish are annually caught by sportsmen, but statistics of the amount are not available. In the case of such products as clams, scallops, and oysters the weight of the edible portion only has been taken into account.

The total weight of these products as they leave the hands of the fishermen is about 1,696,000,000 pounds, representing, as the value of the catch, 47,180,000 dollars. By the processes of canning, salting, smoking, and otherwise preserving, the value of the fish is very much increased. Of the very large quantity of fish annually placed on the American market, the greater part is consumed at home, although a portion is prepared in various ways for export.

To those who have never given thought to the subject it will be interesting to consider to what extent the habitability of earth depends upon the vast area of water covering its surface. Aside from the physical necessity of this arrangement to animated nature, the day may come when the food-products of the deep shall play a still more important rôle in the nourishment of nations than they do to-day.

In a recently-issued bulletin of the United States Department of Agriculture, Dr. Langworthy, of the office of Experiment Stations, gives a résumé of the subject under discussion. As the known facts concerning the nutritive value of fish are therein well presented and the matter nicely arranged, we present the kernel of this compilation in the following paragraphs:

Fish is essentially a nitrogenous food. In this it resembled meat. Neither fish nor meat is a source of carbohydrates. Oysters contain some carbohydrates, but the foods which supply this group of nutrients most abundantly are the cereal grains.

In general it may be said that fish, meat, eggs, milk, etc., also cereals and vegetable foods, all supply fat, the amount varying in the different materials. Fish usually contains less fat than is found in meat. There is, however, much difference in the fat content of the various kinds of fish. They may, indeed, be roughly divided into three classes: The first class would include those containing over 5 per cent. fat; the second those containing between 2 and 5 per cent., and the third containing less than 2 per cent. The first group would include such fish as salmon, shad, herring, Spanish mackerel, and butter-fish; the second, white fish, mackerel, mullet, halibut and porgy; the third, smelt, black bass, bluefish, white perch, weakfish, brook trout, hake, flounder, yellow perch, pike, pickerel, sea bass, cod and haddock.

The place of fish in the diet, if judged by its composition, is the same as that of meat; that is, it is supplementary to cereals and other vegetables, the most of which, as wheat, rye, maize, rice, potatoes, etc., are deficient in protein, the chief nutrient in the flesh of fish.

Preserved fish, as a rule, show a small percentage of refuse, with the exception of a few kinds which are preserved whole. The percentage of actual nutrients is much larger than in the corresponding fresh fish, owing to the removal of a large part of the refuse and more or less water. The gain in nutrients is mostly represented by protein, which is the most valuable nutrient.

Canned fish, which is in effect cooked fish, compares favourably as regards composition with the fresh material. Generally speaking, the amount of refuse is small, since the

portions commonly rejected in preparation for the table have been removed before canning.

Shellfish resemble meat and food-fishes in general composition. They contain, however, a small amount of carbohydrates. Oysters are the most important of the shellfish, judging by the relative amount consumed. Speaking roughly, a quart of oysters contains on an average about the same quantity of actual nutritive substances as a quart of milk, or three-fourths of a pound of beef, or two pounds of fresh codfish, or a pound of bread. But while the weight of actual nutriment in the different quantities of food materials named is very nearly the same, the kind is widely different. That of the lean meat or codfish consists mostly of protein, the substance whose principal function is to make or repair blood, muscle, tendon, bone, brain, and other nitrogenous tissues. That of bread contains considerable protein, but a much larger proportion of starch, with a little fat and other compounds which serve the body as fuel and supply it with heat and muscular power. The nutritive substance of oysters contains considerable protein and fuel ingredients. Oysters come nearer to milk than almost any other common food material as regards both the amounts and the relative proportions of nutrients.

Apparently as the oyster grows older, at least up to a certain time, not only do the proportions of flesh and liquids increase more rapidly than the shells, but the proportion of nutrients in the edible portion increases also; that is to say, 100 pounds of young oysters in the shell appear to contain less of flesh and of liquids than 100 pounds of older ones, and when both have been shucked, a pound of shell contents from the older oysters would contain more nutriment than a pound from the younger.

With oysters, long clams, and round clams in the shell there is naturally a large percentage of waste, as the shell is a large portion of the total weight. The average of 34 specimens of oysters in the shell, for instance, showed only 2.3 per cent. of actual nutrients. Clams and mussels show a somewhat higher percentage. Where these various shellfish are purchased as "solids"—that is, removed from the shell—a comparatively high price is usually paid. Where they are purchased in the shell, there is a very large percentage of waste. The conclusion is therefore warranted that, from a pecuniary standpoint, they are not the most economical of foods for the consumer. On the other hand they have a useful place in the diet in helping to supply the variety which is apparently needed to insure the best workings of the digestive system. Often flavour has a value which cannot be estimated in dollars and cents.

Lobsters, crabs, shrimps, and crawfish are shown by analysis to contain a fairly large percentage of nutrients. This is more noticeable when the composition of the flesh alone is considered. Lobsters and similar foods are prized for their delicate flavour. Except in certain regions where they are very abundant and the cost correspondingly low they must be regarded as delicacies rather than as staple articles of diet. This is, however, a condition entirely apart from their composition. Judged by this alone, they are valuable foods, and may profitably be employed to give variety to the diet.

Although the total amount of turtle and terrapin used in the United States is considerable, the quantity is small as compared with the consumption of such foods as fish proper and oysters. As shown by their composition, turtle and terrapin are nutritious foods, although, under existing conditions, they are expensive delicacies rather than staple and economical articles of diet.

The total amount of frogs consumed per year for food is considerable. As shown by analysis frogs' legs contain a considerable amount of protein. Only the hind legs are commonly eaten. The meat on other portions of the body is edible, although the amount is small, and is eaten in some localities. The prejudice which formerly existed against frogs' legs as a food was doubtless based on their appearance or some similar reason, as they are known to be wholesome.

Digestibility of Fish.—Numbers of artificial-digestion experiments have been made with fish. These indicate

that fish is less quickly digested than beef, being about equal to lamb in this respect. However, as compared with other foods, the difference in digestibility of fish and meat is not very great. Before sweeping deductions can be made the thoroughness with which fish is digested should also be taken into account. A number of experiments have been made with man to learn how thoroughly fish is digested and to compare it in this respect with other foods. In these experiments the food and feces were analysed. Deducting the nutritive material excreted in the feces from the total amount consumed in the food showed how much was retained by the body. It was found that fish and lean beef were about equally digestible. In each case about 95 per cent. of the total dry matter, 97 per cent. of the protein, and over 90 per cent. of the fat were retained by the body. Other experiments of the same character indicate that salt fish is less thoroughly digested than fresh fish. Leaner meats are probably more easily digested than those containing more fat, and the leaner kinds of fish, such as cod, haddock, perch, pike, bluefish, etc., are more easily and completely digested than the fatter kinds, as salmon, shad, and mackerel. Persons differ in respect to the action of foods in the digestive apparatus; and fish, like other food materials, is subject to these influences of personal peculiarity.

[It may here fitly be remarked that the digestibility of fish, as of other food, may be considerably influenced by the manner in which it is prepared for the table; while it is certain that the processes of preserving—salting, drying, smoking, etc.—may render difficult of digestion fish that in the fresh state is much more readily digested.—EDITOR.]

Place of Fish in the Diet.—The chief uses of fish as food are (1) to furnish an economical source of nitrogenous nutrients, and (2) to supply the demand for variety in the diet, which increases with the advance of civilisation.

Inspection of a considerable number of dietary studies of families of farmers, mechanics, professional men, and others, carried on in different regions of the United States, shows that from one-half to two-thirds of the protein of the food is obtained from animal sources—i.e., meats, milk, eggs, and fish. In most cases fish furnish less than 5 per cent. of the animal protein, showing to what a limited extent this food is used in the average household. It is not improbable that in communities where fisheries constitute the principal industry much larger quantities are consumed. It has been found that the labourers employed in the fisheries in Russia consume from 26 to 62 ounces of fish daily. This, with some bread, millet meal, and tea constitutes the diet throughout the fishing season. These quantities are unusually large, but no bad effects are mentioned as following the diet.

There is a widespread notion that fish contains large proportions of phosphorus, and on that account is particularly valuable as brain food. The percentages of phosphorus in specimens thus far analysed are not larger than are found in the flesh of other animals used for food. But, even if the flesh be richer in phosphorus, there is no experimental evidence to warrant the assumption that fish is more valuable than meats or other food material for the nourishment of the brain.

Most physiologists regard fish as a particularly desirable food for persons of sedentary habits. While, so far as can be learned, such statements do not depend upon experimental evidence, they are thought to embody the result of experience.

It is well understood that persons in varying conditions of life and occupation require different kinds and quantities of food. For the labouring man doing heavy work the diet must contain a comparatively large amount of the fuel ingredients and enough of the flesh-forming substances to make good the wear and tear of the body. These materials are all present in the flesh of animals, but not in the requisite proportions. Fish and the leaner kinds of meat are deficient in materials which yield heat and muscular power. When, however, fish and meat are supplemented by bread, potatoes, etc., a diet is provided which

will supply all the demands of the body. Where fish can be obtained at low cost it may advantageously furnish a considerable portion of the protein required, and under most conditions its use may be profitably extended solely on the plea of variety.

Possible Dangers from Eating Fish.—There are several species of fish which are actually poisonous. Few of them, however, are found in the United States, and the chances of their being offered for sale are very small. Such fish are mostly confined to tropical waters.

Fish may contain parasites, some of which are injurious to man. These are, however, destroyed by the thorough cooking to which fish is usually subjected.

The formation of ptomaines quite generally, although not always, accompanies putrefaction (often in its early stages), and therefore great care should be taken to eat fish only when it is in perfectly good condition.

Canned fish should never be allowed to remain long in the can after opening, but should be used at once. There is some possibility of danger from the combined action of the can contents and oxygen of the air upon the lead of the solder or the can itself. Furthermore, canned fish seems particularly suited to the growth of micro-organisms when exposed to the air.

Oysters when "floated" or "fattened" should never be placed in water contaminated by sewage. Severe illness and death have resulted in a number of cases from eating raw oysters contaminated with sewage containing typhoid fever germs.

Finally, fish offered for sale should be handled in a cleanly manner and stored and exposed for sale under hygienic conditions.

LONDON'S FOOD SUPPLY.

ON the subject of food inspection, Dr. Collingridge makes special reference to the responsibility which rests upon the Corporation in the matter, and the means which have been taken by him to secure an efficient inspection of such foods. Among the articles of food condemned during the last six months were: Over 9 tons of bacon, 1,411 crates of bananas, 281 quarters and 153 pieces of beef, 214 tins of beef, 1,390 packages of grapes, over 7 tons of hams, 95 packages of kidneys, and 543 cases of preserved milk; together with 618 carcasses, 269 pieces, 160 pairs of haunches, and 106 legs of lamb and mutton, and 1,253 crates of and 7,041 single rabbits. To give some idea of the magnitude of the meat import trade of London and its rapid growth, it may be mentioned that in 1880 (the first year) 400 carcasses of mutton were brought to London from Australia, while the total for 1898 is upwards of one and a-quarter millions. From New Zealand the number of carcasses brought in 1882 was 8,839, and last year upwards of two and three-quarter millions; from the River Plate the number of carcasses in 1883 was 17,165, and last year more than a quarter of a million. That is to say, the total imports of mutton into London from all ports have increased from 400 in 1880 to nearly four and a-half millions in 1898. The condition of frozen meat on arrival is gradually improving. During the past six months the number of cargoes from Australia in which there was any unsound meat was 21 only out of a total of 86, or 24 per cent., as compared with 40 out of 89, or 45 per cent., in the corresponding period of 1897. In the meat sent from New South Wales there has been a specially marked improvement, owing to the great efforts that have been made to ship cargoes in good condition. In the New Zealand cargoes, however, 12 out of 56, or 20 per cent., showed some slight damage on arrival.

Dr. Collingridge then refers to the steps which have been taken for the abatement of nuisances, the enforcement of good drainage, and the treatment of offensive cargoes.

EMBALMED BEEF.

THE violent controversy which has arisen in America concerning the so-called "embalmed beef," and very unfortunate episodes which have recently occurred at Sens and Havre, have again, says "The Army and Navy Gazette,"

caused great attention to be directed to the subject of prepared and canned meat. At Sens a number of men of the 82nd Infantry were seized with vomiting and diarrhoea of exceptional gravity, of whom twenty were sent to the hospital, and one or more died. An inquiry showed that the attack was due to the consumption of preserved food of defective quality. At Havre similar symptoms declared themselves, although the resulting cases of illness were not so serious; but an inquiry attributed them to the same cause. An interpellation in the Chamber drew public attention to the grave nature of the case, and an instant order was issued that the boxes of meat prepared by the particular firm and in the same year as those which had caused the poisoning should not be again issued to the troops. At Havre 20,000 tins of preserved meat, which had been for some time in the stores, were opened, and though their contents were undoubtedly wholesome, they were thrown into the sea. Offers were made to buy the food in question so that it might be given to dogs and pigs, but as a measure of safety the offers were refused. The "Echo de l'Armée," commends these measures as excellent, but remarks that prevention is better than cure, and that the most stringent orders should be issued as to the food supplied, with criminal responsibility imposed upon offenders. Recently M. de Freycinet addressed a circular to the officers in command of army corps directing that, by December 31st, all the canned food dating from the years 1893 and 1894, and all the salt pork dating from 1897 and earlier years, shall be consumed. Our contemporary considers that this order needs to be amended so as to prescribe the examination of all food supplied in the years subsequent to 1894.

A NEW BISCUIT.

THE French Army will be experimented on in the near future by the introduction of a new biscuit, to be served out when on the march or during manœuvres. It will be composed of 33 parts of gluten, 100 parts of wheat flour, a small portion of clarified lard, and the whole just moistened with a thick syrup of sugar and water. The paste will be compressed by machinery and cut into various shapes. The advantages looked for are digestibility, nourishment, and saving of space.

CORRESPONDENCE.

DO COWS GIVE POORER MILK IN TIMES OF DROUGHT?

To the Editor of FOOD AND SANITATION.

DEAR SIR,—In reply to the query of Mr. Ralph Simey, I may say that as far as my observations are concerned there is no truth in the statement that "In times of drought cows give poorer milk than under normal conditions."

This opinion is based upon the results of some hundreds of analyses per annum made during the past twenty years.

But, perhaps, the best proof is to give the average composition of samples taken by me during the past year, all of which I know to be genuine.

I give also the number of rainy days and rainfall for each month.—Faithfully yours,

G. EMBREY.

City and County Laboratory, Belmont, Brunswick Road, Gloucester; Feb. 27, 1899.

RAINFALL AND COMPOSITION OF MILK, 1898.

Month.	Days on which more than 'or inch of rain fell.	Amount of rain in inches.	Total solids per cent.	Fat per cent.
January	..	5	13.67	4.27
February	..	11	12.55	3.65
March	..	7	13.1	4.2
April	..	11	12.67	4.05
May	..	17	12.8	3.8
June	..	11	12.75	3.8
July	..	9	13.42	4.8
August	..	11	12.2	3.85
September	..	4	12.7	4
October	..	12	13	4.3
November	..	12	12.6	4
December	..	13	12.85	4

(Signed) G. EMBREY, Public Analyst.

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Food and Sanitation.

SATURDAY, MARCH 11TH, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

All communications for the Editor of "Food and Sanitation" must be addressed to

4, AVE MARIA LANE,
LONDON, E.C.

THE NEW FOOD AND DRUGS ACT.

At last we have the long-delayed proposals of the Government before us in the new Adulteration Act, of which we give the text in another page, and to those who understand the question it reveals itself as a very poor measure. We do not object to the Board of Agriculture being the authority to enforce the Acts, inasmuch as to our thinking the suppression of adulteration falls within its sphere; but the Bill fails to state what is adequate enforcement.

The samples taken may be 1 per 500 population or 1 per 5,000, and it is left to the pleasure of the responsible official to decide what figure he considers adequate. This is too indefinite, and the Act should specify the minimum number of samples which shall be deemed sufficient.

Experience has shown that the samples should not be less than 1 per 500 of the population.

The absence of a Court of Reference, demanded alike by traders and the Select Committee, is a grave defect in the Bill. It leaves the vexed question, "What is adulteration?" in its present chaotic state, and is a serious danger to all whom the Acts concern. Whether lard is to be only hog's fat, baking powder is to contain no alum, or vinegar is to be the product only of malt and grain—these and a host of other litigious questions are left to cause strife, worry, and expense to traders and local authorities. We fear that, unless the measure be improved by a Court of Reference, traders will find it a serious danger. As regards margarine, the measure does something and nothing. The clause re a 10 per cent. admixture of butter is mere ignorance, as no analyst could analyse and certify honestly to such a percentage, and the incapable and inexperienced pseudo food analysts at Somerset House are certainly not capable of doing this. About 6 per cent. is the most butter-fat margarine will absorb in the churning. Why, then, allow any further admixture?

These new Government proposals do not prohibit in any real way the sale of margarine as butter. The retailers who use blending machines now can still continue their use, and sell mixtures in the same old way. We see no method of stopping the fraud save by enacting that no margarine shall be sold otherwise than in quarter, half, or one pound brick-shaped packages, marked according to the now proposed form.

Microscopic labelling is left as it now is. The preservative question—essentially one for a Court of Reference, in the light of the daily discoveries of new drugs and forms of drugging foods—Mr. Long and his friends apparently do not know what to do with. Unless in these and many other points the Bill is greatly improved in Committee, it will be found to leave the Adulteration question the hopeless, harassing muddle it now is.

TEXT OF THE NEW SALE OF FOOD AND DRUGS BILL.

The following is the text of the Sale of Food and Drugs Bill, introduced in the House of Commons by Mr. Long on behalf of the Government:

PART I.

AGRICULTURAL PRODUCTS.

1.—(1) If there is imported into the United Kingdom any of the following articles, namely:—(a) Margarine or Margarine-cheese, except in packages conspicuously marked "Margarine" or "Margarine-cheese," as the case may require; or (b) adulterated or impoverished butter (other than margarine), or adulterated or impoverished milk, except in packages or cans conspicuously marked with a name or description indicating that the butter or milk has been so treated; or (c) condensed, separated, or skimmed milk, except in tins or other receptacles which bear a label whereon the words "Separated Milk" or "Skimmed Milk," as the case may require, are printed in large and legible type; the importer shall be liable, on summary conviction, for the first offence to a fine not exceeding £20, for the second offence to a fine not exceeding £50, and for any subsequent offence to a fine not exceeding £100. (2) Prosecutions for offences under this section shall be undertaken by the Commissioners of Customs; and the word "importer" shall have the same meaning as that expression has in the Customs Consolidation Act, 1875. (3) The Commissioners of Customs shall, in accordance with directions given by the Treasury after consultation with the Board of Agriculture, take samples of consignments of imported butter, or other article mentioned in the foregoing provisions of this section. (4) Where the Commissioners take a sample of any consignment in pursuance of such directions they shall divide it into not less than three parts, and send one part to the importer and one part to the principal chemist of the Government laboratories, and retain one part. (5) In any proceeding under this section the certificate of the principal chemist of the result of the analysis shall be sufficient evidence of the facts therein stated, unless the defendant re-

quire that the person who made the analysis be called as a witness. (6) If, in any case, the Commissioners of Customs are of opinion that an offence against this section has been committed, they shall communicate to the Board of Agriculture for their information the name of the importer and such other facts as they possess as to the destination of the consignment. (7) For the purposes of this section, butter or milk shall be deemed to be adulterated or impoverished if it has been mixed with any other substance, or if any part of it has been abstracted so as to affect injuriously its quality, substance, or nature. Provided that butter or milk shall not be deemed to be adulterated by reason only of the addition of any preservative or colouring matter which does not render the butter or milk injurious to health.

2.—(1) The Board of Agriculture may, in relation to any matter appearing to the Board to affect the general interests of agriculture in the United Kingdom, direct an officer of the Board to procure for analysis samples of any article of food, and thereupon the officer shall have all the powers of procuring samples conferred by the Sale of Food and Drugs Acts, and those Acts shall apply as if the officer were an officer authorised to procure samples under the Sale of Food and Drugs Act, 1875, except that—(a) one part of the sample shall in every case be sent to the Board of Agriculture by the officer procuring the sample; and (b) the fee for analysis shall be payable to the analyst by the local authority of the place where the sample is procured. (2) The Board of Agriculture may communicate the result of the analysis of any such sample to the local authority, and thereupon there shall be the like duty and power on the part of the local authority to cause proceedings to be taken as if the local authority had caused the analysis to be made.

3.—(1) If the Board of Agriculture, after communication with a local authority, are of opinion that the local authority have failed to execute or enforce any of the provisions of the Sale of Food and Drugs Acts in relation to any article of food, and that their failure affects the general interests of agriculture in the United Kingdom, the Board may, by order, empower an officer of the Board to execute and enforce those provisions, or to procure the execution and enforcement thereof in relation to any article of food mentioned in the order. (2) The expenses incurred by the Board of Agriculture or their officer under any such order shall be treated as expenses incurred by the local authority in the execution of the said Acts, and shall be paid by the local authority to the Board on demand, and in default the Board may recover the amount of the expenses with costs from the local authority. (3) For the purposes of this section an order of the Board of Agriculture shall be conclusive in respect of any default, amount of expenses, or other matter therein stated or appearing. (4) An order under this section shall not affect any appointment of an analyst under section ten of the Sale of Food and Drugs Act, 1875.

4. The Board of Agriculture may, after such inquiry as they deem necessary, make regulations for determining what deficiency in any of the normal constituents of genuine milk, butter, or cheese, or what addition of extraneous matter, in any sample of milk, butter, or cheese, shall for the purposes of the Sale of Food and Drugs Acts raise a presumption, until the contrary is proved, that the milk, butter, or cheese is not genuine, and an analyst shall have regard to such regulations in certifying the result of an analysis under those Acts.

5. The provisions of the Margarine Act, 1887, as amended by this Act, shall extend to margarine-cheese, and shall apply accordingly, with the substitution of "margarine-cheese" and "cheese" for "margarine" and "butter."

6.—(1) The brand or mark required by section six of the Margarine Act, 1887, shall be on the package containing margarine or margarine-cheese, and not solely on a label, ticket, or other thing attached to the package. (2) The letters required to be printed on the paper wrapper in which margarine or margarine-cheese is sold shall be not less than half an inch long and distinctly legible, and no other printed matter shall appear on the wrapper.

7.—(1) Every occupier of a manufactory of margarine

or margarine-cheese, and every wholesale dealer in such substances, shall keep a register showing the quantity and destination of each consignment of such substances sent out from his manufactory or place of business, and this register shall be open to the inspection of any officer of the Board of Agriculture. (2) If any such occupier or dealer—(a) fails to keep such a register, or (b) refuses to produce the register when required to do so by an officer of the Board of Agriculture, or (c) fails to keep the register posted up to date, or (d) wilfully makes any entry in the register which is false in any particular, or (e) fraudulently omits to enter any particular which ought to be entered in the register, he shall be liable on summary conviction to a fine not exceeding £10. (3) The provisions of section nine of the Margarine Act, 1887, relating to registration of manufactories shall extend to any premises wherein the business of a wholesale dealer in margarine or margarine-cheese is carried on. (4) The registration of a manufactory or other premises shall be forthwith notified by the local authority to the Board of Agriculture.

8. It shall be unlawful to manufacture, sell, expose for sale, or import any margarine which contains more than 10 per cent. of butter fat, and every person who manufactures, sells, exposes for sale, or imports any margarine which contains more than that percentage shall be guilty of an offence under the Margarine Act, 1887, and any defence which would be a defence under section seven of that Act shall be a defence under this section, and the provisions of the former section shall apply accordingly.

9. Every person who in any highway or place of public resort sells milk from a vehicle or from a can or other receptacle shall have inscribed on the vehicle or receptacle the name and address of the person by whom or on whose behalf the milk is sold, and in default shall be liable on summary conviction to a fine not exceeding £2.

10. In the case of a sample taken of milk in course of delivery, or of margarine or margarine-cheese forwarded by a public conveyance, the person taking the sample shall forward a portion of the sample marked, and sealed, or fastened up, to the consignor if his name and address appear on the can or package containing the article sampled.

11. Every tin or other receptacle containing condensed separated or skimmed milk must bear a label on which the words "Separated Milk" or "Skimmed Milk," as the case may require, are printed in large and legible type, and if any person sells or exposes or offers for sale condensed separated or skimmed milk in contravention of this section he shall be liable on summary conviction to a fine not exceeding £2.

PART II.

SALE OF FOOD AND DRUGS.

12. The label referred to in section eight of the Sale of Food and Drugs Act, 1875, shall not be deemed to be distinctly and legibly written or printed within the meaning of that section unless it is so written or printed that the notice of mixture given by the label is not obscured: Provided that nothing in this enactment shall hinder or effect the use of any registered trade mark, or of any label which has been continuously in use for at least seven years before the commencement of this Act; but the Comptroller General of Patents, Designs, and Trade Marks shall not register any trade mark purporting to describe a mixture unless it complies with the requirements of this enactment.

13.—(1) In section 14 of the Sale of Food and Drugs Act, 1875, the words "offer to" and the words "and shall, if required to do so, proceed accordingly" shall be repealed. (2) Section 15 of the same Act shall also be repealed.

14. Where, under any provision of the Sale of Food and Drugs Act, 1875, a person guilty of an offence is liable to a fine not exceeding £20, he shall be liable for a second offence under the same provision to a fine not exceeding £50, and for any subsequent offence to a fine not exceeding £100.

15. Notwithstanding anything in section 17 of the Food and Drugs Act, 1875, where any article of food or drug is exposed for sale in a tin or packet duly labelled, no

person shall be required to sell it except in the unopened tin or packet in which it is contained.

16.—(1) The limit of 28 days fixed by section 10 of the Sale of Food and Drugs Act Amendment Act, 1879, for the service of a summons under the Sale of Food and Drugs Acts shall extend to non-perishable articles, and the words "and in the case of a perishable article" in that section shall be repealed. (2) A summons shall not be made returnable in less time than 14 days from the day on which it is served. (3) There must be served with any such summons a copy of any analyst's certificate obtained on behalf of the prosecutor.

17.—(1) A warranty or invoice shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts unless the defendant has, within seven days after receipt from the purchaser of notice of his intention to take proceedings, sent to the purchaser a written notice stating that he intends to rely on the warranty or invoice, and specifying the name and address of the person from whom he received it. (2) A warranty or invoice given by a person resident outside the United Kingdom shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts unless the defendant proves that he had taken reasonable steps to ascertain the accuracy of the statement contained in the warranty or invoice.

18. The justices or court referred to in section 22 of the Sale of Food and Drugs Act, 1875, shall on the request of either party under that section cause an article of food or drug to be sent to the Commissioners of Inland Revenue for analysis.

19.—(1) The certificate of analysis required by the Sale of Food and Drugs Act, 1875, shall be in a form prescribed by the Commissioners of Inland Revenue, and section 18 of that Act and the schedule to the Act are hereby repealed. (2) At the hearing of the information in any proceeding under the Sale of Food and Drugs Acts, the production by the defendant of a certificate of analysis by a public analyst shall be sufficient evidence of the facts therein stated, unless the prosecutor requires that the analyst be called as a witness.

PART III.

SUPPLEMENTAL.

20. All powers and duties vested in or imposed on the Secretary for Scotland by the Sale of Food and Drugs Acts shall be vested in or imposed on the Local Government Board for Scotland.

21. This Act shall apply to Ireland with the substitution for "the Board of Agriculture" of "the Lord Lieutenant acting by the advice of the Privy Council."

22. In this Act, unless the context otherwise requires, the expression "margarine-cheese" means any substance, whether compound or otherwise, which is prepared in imitation of cheese, and which contains fat not derived from milk; the expression "cheese" means the substance usually known as cheese, containing no fat derived otherwise than from milk. The expression "local authority" means any local authority authorised to appoint a public analyst under the Sale of Food and Drugs Act, 1875. Other expressions have the same meaning as in the Sale of Food and Drugs Acts, and an offence under this Act shall be treated as an offence under those Acts.

23.—(1) This Act may be cited as the Sale of Foods and Drugs Act, 1899, and the Sale of Food and Drugs Act, 1875, and the Sale of Food and Drugs Act Amendment Act, 1879, and the Margarine Act, 1887, and this Act may be cited collectively as the Sale of Food and Drugs Acts, 1875 to 1899, and are in this Act referred to as the Sale of Food and Drugs Acts. (2) This Act shall come into operation on the first day of January, 1900.

THE NEW SALE OF FOOD AND DRUGS BILL.

THE DISCUSSION IN THE HOUSE OF COMMONS ON THE SECOND READING.

On March 6th, in the House of Commons, the Minister for Agriculture, Mr. Long, in moving the second reading of

this Bill, said that all who had studied the law affecting the sale of food and drugs were agreed that some amendments were required, and, to a very large extent, there was agreement as to the form those amendments should take. More than fifteen years ago the people interested in the trade expressed a desire that there should be some alteration of the law, but even before the hon. members of the House had advocated reforms. But it was not until 1892 that a deputation waited on the hon. member for Ilkeston and pressed upon him the necessity for some reform. Subsequently a large deputation of members of Parliament waited upon Mr. Shaw Lefevre, who was at that time President of the Local Government Board, and, finally, owing to the pressure brought to bear by those deputations and to numerous suggestions made, the committee was appointed over which the hon. member for Ilkeston presided. After the last general election the hon. member withdrew from the chair and his place was taken by the hon. member for South Tyrone. The committee sat for three years and heard 68 witnesses. They reported in 1896, and it was upon the report they presented and upon the evidence they took that the legislation the Government now proposed was founded. In the main the committee found that it was not so much an amendment of the law that was required as an improvement in administration. (Hear, hear.) To put it roughly, they found that when administration was vigorously conducted diminution in fraud and adulteration followed. Evidence to the same effect was to be found in the figures annually presented by the Local Government Board. Those figures showed that in proportion as the number of samples examined increased the percentage of adulterations decreased. Thus, in London, in 1887-88, the number of samples examined was 753, the number of adulterations 142, the percentage being 19. In 1896-97 the number of samples examined had risen to 2,038, the number of adulterations was 205, the percentage being 10. The experience was the same in Manchester and other places. Since he, in his capacity of President of the Local Government Board, undertook to deal with this question he had received a great many memorials from various bodies. He found that in some quarters there existed a misapprehension as to the real force that was behind the present agitation. It had been erroneously thought that the demands for the Bill came exclusively from the agricultural districts, that this was an attempt on the part of the agricultural community to secure some protection for their own industry against competition which they thought to be unreasonable and unfair. He assured the House that that was not the case, because for every one demand for legislation which had been made to him by the agricultural community there had been half a dozen demands made by bodies who had nothing to do with agriculture. The Manchester Chamber of Commerce came to him by deputation and pressed upon him in the strongest possible terms their conviction that nothing but the most drastic legislation would meet the case. The Association of Liverpool Grocers, who certainly could not be called an agricultural body, held similar views and pressed them upon him with equal force; and the Butter Association of the metropolis, which represented a large trade, had expressed the opinion that drastic legislation was absolutely necessary. The Government had divided their Bill into two parts, the first of which dealt with specially agricultural products, and the second with the general law of food and drugs; but before dealing with the two branches of the measure he desired to say that it had been stated that the protection which was asked for against fraud was unreasonable and unjust. A very cursory examination of the laws of other countries showed that those countries had gone great lengths in the legislation they had passed in order to protect their own industries. For instance, extremely drastic legislation had been resorted to in the case of the manufacture of margarine, and he did not think it was to be wondered at that people in this country interested in that particular manufacture should demand some similar legislation here. The Government, however, agreed with the committee in the finding that they could do what they wanted to put an end to fraud without legislation

of so drastic a character as that which other countries had thought it necessary to adopt. He imagined they would all agree upon two simple propositions. One was that they ought not to interfere by legislation with a legitimate industry, which produced a wholesome and valuable article of food in great demand by the poorer classes of the country especially, and which they were entitled to have and to buy freely and openly, so long as it was sold in a straightforward manner (hear, hear), and the other was that the law of the land as now found on the Statute-book must be obeyed and carried out, and that if it was possible to secure it trade must be conducted on honest and honourable principles. (Hear.) Taking these two propositions as conditions which must be antecedent to any legislation, he thought it would not be difficult for the House so to alter the law by tightening it up in two or three directions, and by conferring on the Board of Agriculture some powers they did not now possess, as to meet all requirements. It was proposed by the Bill that samples should be taken at the port of debarkation of certain articles of dairy produce, butter, cheese, and milk. What had already been done by his department in this way showed the advantages of the system. In 1896-97 963 samples were taken, of which 46 were found to be adulterated and 43 doubtful. In 1897-98 1,271 samples were taken, of which 25 were shown to be adulterated and 11 doubtful, while from April to October, 1898, 612 samples were taken, and of these only two were adulterated and none doubtful. There was, therefore, every reason to believe that if that policy was regularised better results would follow. Power was also sought to proceed against the people who were responsible for the introduction of adulterated articles. At present the powers were altogether insufficient, as was shown by the case of a firm which was warned on three separate occasions that the samples of their imports had been found to be adulterated. The retail dealer escaped on the plea that he bought the goods with a warranty from that very firm. With regard to the home trade, the Bill proposed that the duty of carrying out the Acts should rest with the local authority as at present, but it also proposed that the Board of Agriculture should have power to guide the local authorities and urge them to carry out the powers they possessed. If the local authority were in default, the Bill proposed that the Board of Agriculture should have power itself to do the work and to charge the cost of proceedings to the local authority. (Hear, hear.) He believed that that would secure the uniform administration of the Acts all over the country, which was, after all, more desirable than any change in the law. (Hear, hear.) Some slight alteration in the law was asked for as affecting some of these articles. It was proposed that the amount of what was called butter fat allowable in margarine should be fixed at 10 per cent. On the best evidence he could obtain from experts and manufacturers, he was convinced that the very best margarine might have in it $2\frac{1}{2}$ to 5 per cent. of butter fat. Therefore the figure of 10 per cent. could not be said to put an end to the manufacture of the very best margarine. He had had a good deal of evidence to show that there was a considerable sale for an article in which there was a great deal more than 10 per cent. of butter fat. He was told it was known as "mixture." All the evidence he had got went to convince him, however, that there would be very little demand for this article if it was not for the fact that it was sold as "mixture" and not as margarine. Before the committee much evidence was given showing that admixtures of margarine and butter were sold at pure butter prices. If, therefore, it was true that the majority of this stuff, whether made in this country or imported, was sold for that which it was not, and if they could produce the very best article at a moderate price, so as to meet the demands of those who liked to have this butter substitute on their tables, then nobody could object to their action in limiting the amount of butter to be found in margarine to 10 per cent. This enabled a good article still to be produced and yet placed a limit upon fraud and unfair competition. He was aware that many people thought a step of this kind could not be effective unless the colouring of margarine was prohibited,

but if they were to prohibit the colouring of margarine they would at the same time be driven to prohibit the colouring of butter, cheese, milk, and other commodities, which would be going further than was necessary. Margarine was coloured for the same reason that butter, cheese, or milk were—to make it look attractive to the consumer. He was as eager as any one that fraudulent dealing should be stopped, but he could not understand why it should be seriously proposed that the colouring of margarine, a wholesome article of food, should be prohibited, while the colouring of other commodities should be allowed. With regard to the general law relating to food and drugs, there were 11 or 12 recommendations made by the representatives of the grocers and others. Of these, the Government had dealt with seven. There was a small misapprehension with regard to Clause 17; because it was not intended to give to an invoice the same legal force as a warranty. They were not prepared to recommend that the assistant should be made punishable for offences under the Act, nor that there should be some addition to the qualifications of analysts. On the whole, while there was nothing novel or heroic in the Bill, he believed that it embodied a practicable proposal, and that it would enable his department, in co-operation with the local authorities, to deal with fraud which existed to a larger extent than many imagined, while it would not interfere with a legitimate industry or curtail the food of the people.

Mr. LOUGH (Islington, W.), in rising to move the rejection of the Bill, said he was in favour of applying the strictest measures that could be applied wisely to what was certainly a very great defect in our present system. The fault he found with this Bill, however, was that it was not an adulteration Bill at all. It was a Bill which interfered with the existing arrangements of local government and with the free importation of food; it was a Bill also to raise prices and to protect the agricultural interest. It was purely a protective Bill—it was conceived in a bad spirit of protection, and that was the reason why he asked the House to reject it. The right hon. gentleman had not explained why the Board of Agriculture had come into this matter at all. It was the duty of the local authorities to enforce the Food and Drugs Act, and the local authorities were under the Local Government Board. Why were not these matters left in the charge of the Local Government Board? Under the Bill the Board of Agriculture had power to interfere with the Commissioners of Customs at the ports of the United Kingdom, and the Commissioners were only to act in consultation with the Board. The Board of Agriculture, moreover, claimed the right to stop carriers on the public road and to examine anything they might have in their carts, and it claimed the right to appoint officers in every part of the kingdom, and to charge the cost of those officers to the local government of the locality. It also claimed the right to enter the business place or shop of any person who might be described as a wholesale dealer, and to see that he kept a register of all sales of the articles mentioned in the Act, and, if he did not keep such a register posted up, the most drastic powers could be put in operation against him. Those were very far-reaching proposals. In the second clause of the Bill the idea of checking adulteration was given up altogether, and it was seen that the intention of the Bill was not to safeguard the interests of the whole population, but the interests of the agricultural class at the expense of the rest of the community. The Bill was intended to exclude foreign food and competition. (Cries of "No.") The right hon. gentleman wanted to force the people of this country to eat bad butter made at home instead of the good butter made in Normandy. (Laughter.) Margarine was a cheap and excellent food, and he did not see why a stigma should be cast upon it in this Bill. There was a clause which prevented the improvement of margarine and made it an offence to put more than 10 per cent. of butter fat into it. Butter fat was the best ingredient of butter, and they ought to induce the manufacturers to put as much butter fat as possible into margarine. (Laughter.) He had no objection to the second part of the Bill; it was to the first part of the Bill, which gave these drastic powers to the Board of Agriculture, that he objected. The Board of Agriculture was the most

retrograde of all the Departments of the Government (laughter and "hear, hear"), and he looked with considerable jealousy upon the great demand which the Board was making in this Bill. He therefore begged to move that the Bill be read a second time on this day six months.

SIR C. CAMERON seconded the amendment. He said he did so not so much because of any feeling of animosity to the first part of the Bill as because of his dislike to the second part of it. (Laughter.) He shared the view of his hon. friend with regard to the transference of this Bill to the Board of Agriculture. In 1874-75 the first Adulteration Act was brought in by the President of the Local Government Board; the committee, which was appointed at his suggestion, was presided over in the first instance by his hon. friend the then Secretary to the Local Government Board, and afterwards by the present Secretary to the Local Government Board, and the Adulteration Bill of last year was introduced by the President of the Local Government Board. It, therefore, did seem most suspicious and most unaccountable that this Bill should be introduced in charge of the Board of Agriculture. Was it that the Secretary to the Local Government Board or the President of that Board did not understand the subject so well as the President of the Board of Agriculture? A more lamentable exposure of ignorance of the whole subject than was made by the right hon. gentleman the President of the Board of Agriculture he had never witnessed. (Cries of "No. no.") He had confessed that until the last few days he did not understand what "mixtures" in the butter trade meant. It was one of the standing grievances of the traders that they were obliged to sell a mixture—it might be of 50 per cent. of margarine and 50 per cent. of butter—not as what it was, but as margarine. Until they dealt with margarine and butter on the same principle as they dealt with chicory and coffee and similar mixtures they would never have satisfactory legislation on the subject of adulteration. In order to put down adulteration they must stop the importation of fraudulent goods, and they must get at the wholesale manufacturer. Where, in this Bill, was there any power to do that? He had always found that the bulk of the traders were opposed to adulteration; they considered it an unfair form of competition and desired to deal very harshly with the black sheep among them. He was perfectly certain that when the traders whom the right hon. gentleman managed partially to square got to know the Bill thoroughly they would get up an agitation against it, which would reinforce the efforts which every representative of an urban constituency was bound to make against a measure the only possible design of which was to secure a monopoly for a certain class of agriculture produce.

SIR M. STEWART (Kirkcudbright) welcomed the Bill, and was hopeful that when it was passed into law it would do much to secure that people got what they wanted when they went to purchase cheese, butter, or margarine. He doubted, however, whether the provisions dealing with adulteration would simplify matters. It was very difficult to decide when a thing was and was not adulterated. He knew of a recent case in which an experienced analyst had declared that a compound with 33 per cent. of oleo was pure butter. If the mixture of butter fat with margarine was not to legally exceed 10 per cent. there would be no end of prosecutions, many of which would be very harmful to the margarine trade, while they would do no good to butter makers or butter consumers.

Mr. STRACHEY (Somerset, S.) said that the Bill now introduced would not satisfy the producer or safeguard the consumer effectively. In the first place he would point out that there was no definite provision in the Bill prohibiting the addition to milk or butter of any matter detrimental to health. At the present time the addition of so-called preservatives to milk and cream was increasing. The more common ones were borax, boracic acid, boroglycerides, benzoic acid, salicylic acid, formalin, sodium bicarbonate, and sodium fluoride. Chemists agreed that all of these drugs, if added in excess, were harmful, if not dangerous to

children and not beneficial for adults. But some, such as salicylic acid and formalin, were, even in small quantities, harmful if taken daily. Other countries had definitely by law protected the consumer by forbidding the addition of preservatives as being prejudicial to health. The consumer should be protected and no preservatives should be introduced into milk or butter either by the producer or the vendor. The consumer ought to get what he paid for, and he certainly did not, knowingly or willingly, ask for or pay for doctored milk, butter, or cream. The prohibition of preservatives might cause some inconvenience, but it was of more importance to protect the consumer and the honest trader. Again, the consumer should be protected against the addition of separate milk to whole milk and the addition of margarine to butter. The provisions contained in the Bill with the object of securing protection were either vague or of small value and left too much to rules and regulations to be made by the Board of Agriculture. But the most remarkable omission from the Bill was that it did not attempt to carry out the recommendation of the Select Committee on Food Products—adulteration in reference to the colouring of margarine and its admixture with butter. The Select Committee in their report said:

"However, your committee cannot but feel that the adulteration of butter with margarine and the fraudulent sale of margarine for butter are greatly facilitated in many instances by the artificial use of ingredients to colour margarine. While your committee are reluctant to interfere with the manufacture of any edible commodity, they cannot in the interests of honest trading arrive at any conclusion other than to recommend the absolute prohibition of artificial colouring of margarine to resemble or imitate butter."

In face of that recommendation he was surprised that no clause had been introduced in the Bill to deal with the matter. He had no more desire than the right hon. gentleman the President of the Board of Agriculture had to kill the margarine industry, but what was desired was that the article should be sold for what it was, and that the consumer should not be deceived, as he was continually. (Hear, hear.) In the interests of the consumer and of the honest trader he was prepared to go even further than some of his hon. friends. It seemed to him unadvisable that any article of food should be artificially coloured or adulterated in such a way as to deceive or defraud the purchaser. This custom had grown up of late years in regard to milk, cream, and butter, and he for one strongly deprecated it. The traders themselves, through one of their recognised journals, complained that the Bill was at once ineffectual and harassing. He felt certain that all honest traders would welcome the abolition of all restrictions on the sale of margarine if at the same time it was not allowed to be coloured to imitate butter, so that there might be no deception practised on the consumer. The Bill moved in the right direction in many respects, but he felt sorry that it had not been framed in a more simple yet drastic manner, calculated to give the consumer a larger measure of protection than it did at present, without at the same time harassing the retail trade.

Mr. JOHNSTONE (Sussex, Horsham) asked the hon. member who had just sat down whether he would like to trust the milk sent up from Somerset to the tender mercies of the South-Western Railway Company on a hot afternoon in July without some small admixture of preservative.

Mr. STRACHEY said he sent milk up himself without preservatives.

Mr. JOHNSTONE said he did not know whether the hon. member superintended the despatch of the milk himself (laughter), but he doubted whether those living nearer to London than Somerset would care to trust their milk to the tender mercies of another railway on such an afternoon without some small admixture of preservative. The great difficulty experienced by those who were engaged in the administration of the Food and Drugs Act and who desired to put down adulteration was the present system of taking samples. If the Board of Agriculture or any other department had power to send round unknown inspectors unexpectedly and take samples, and exercised that power

with frequency, the percentage of convictions would be found to fall, and it was therefore to be assumed adulteration would decrease. The power of the Board to take and analyse samples was, he thought, one of the most salutary provisions in the Bill. The standardizing of the purity of an article was a wise and judicious proposal. As he understood it, if an article was not up to standard the presumption of proof of purity would be with the seller. This was fairer than making the standard a rigid one, because the purity of dairy produce might depend on the condition of the cow. It seemed to be generally agreed that margarine was a wholesome article of food. He had not himself knowingly taken it (laughter), but possibly it had in the course of travelling been put before him as butter. Shopkeepers had told him there was a steady demand for it, and consumers had become accustomed to its appearance. In respect to this article and to dairy produce, he was sure that dealers would be greatly hampered if not permitted to give their articles that appearance by a slight admixture of colouring to which consumers were accustomed. His right hon. friend had shown courage with a wise discretion in going against the wishes of some of his agricultural supporters in this respect. Though the Bill did not go so far as he could wish, and no Bill ever did with hope of passing, he gave it his hearty support as an honest measure, and he would with confidence commend it to those he represented.

SIR W. FOSTER (Derby, Ilkeston) complained that some of the most important recommendations of the committee had been passed over. At the same time, some recommendations of great value had been dealt with, and from this point of view he congratulated the promoters of the Bill. He thought that with regard to the procuring of samples a right step had been taken. The right principle was to protect, not any particular trade, but the consumer. They must not forget that while science was doing a great deal in one direction it was also doing a great deal in the other direction—in producing fraudulent food products. (Hear, hear.) He referred to the cases of margarine, to cheese, and to condensed milk, and he specially emphasised the importance of having correct descriptions of each article. He thought a great deal of good would be done by enabling the authorities to interfere at the port of entry. As to impoverished butter, he would have it looked after in the same way; at all events, it should be labelled. The right principle in all these cases was, not to stop the sale, but to see that the articles were sold under accurate descriptions. (Hear, hear.) The public had a right to have the articles if they were sold under honest descriptions. A man had a right to have margarine if he wanted it, but he ought not to have it served to him as butter. The committee had a strong opinion about some Court of reference. There should be a board of scientific referees to settle standards. The Board of Agriculture was illfitted by constitution and experience for such a duty and had not been in existence long enough. We did not want much alteration of the law as it at present stood. The existing law if properly administered was quite sufficient to protect the public. But the law was inadequately administered, and in some parts of the country was scarcely enforced at all. The Local Government Board, if it had the necessary power conferred upon it, would be the most suitable body to enforce the law. It would be better than any newly-appointed authority. The Bill seemed more in the interests of agriculture than in the interests of the purity of the food of the people.

Mr. LONG, interposing, said the action of the Board of Agriculture would be confined to articles chiefly connected with agriculture.

SIR W. FOSTER went on to say that one clause of the Bill gave great powers to the Board of Agriculture in respect to the inspection of margarine manufactories. He felt that that clause would be regarded by margarine manufacturers as vexatious and harassing. (Hear, hear.) He was glad, however, that by the Bill the penalties were strengthened. For the second offence the fine might be from £20

to £50, while for the third offence the penalty might be £100. He believed it would be better to have a minimum penalty for the second offence, and he would not object if there were imprisonment for repeated offences. (Hear, hear.) In conclusion, he pointed out that the Bill had only been in the hands of members a few days, and that the traders of the country had had little time to consider its provisions. Under the circumstances, he trusted that the measure would not be hastily pushed on, and that, for instance, they would not be asked to read the Bill a second time to-night. (Cries of "Oh!")

Mr. LLEWELLYN (Somerset, N.) felt that, although the Bill did not go as far in certain directions as some people wished, in it undoubtedly would be found powers which ought to exist. Chiefly the interest in the Bill centred round that clause which dealt with the colouring of different articles of food. The President of the Board of Agriculture had given good and sound reasons why he could not agree to the prohibition of the colouring of margarine; but, inasmuch as they could not prohibit the colouring of margarine, they also must allow to continue the colouring of butter. Cheese and butter were not the only commodities which were coloured. Milk was coloured to a great extent for the purpose of fraud—in fact, there was not the slightest doubt that colouring meant fraud. (Hear, hear.) He thought that the ingredients used in the colouring and preservation of butter ought to be disclosed (hear, hear), and he would suggest that words should be added at the end of the clause dealing with this subject to the effect that coloured butter and milk should be sold only as coloured, and that the vendor should disclose to the purchaser the ingredients of the colouring and preservative. He did not believe that it was impossible to fix on a standard of purity of milk. On the contrary, he believed it was a necessity. (Hear, hear.) He wished to get under this Bill an ultimate Court of Appeal. Those who had to deal with these matters in petty sessions knew the difficulty they had in dealing with the evidence. He contended that it was not fair that farmers who took the trouble to keep good stock and clean dairies should not get the benefit of them. (Hear, hear.)

Mr. KILBRIDE (Galway, N.), though not going to support the amendment, thought the Bill as interfering with traders went a little too far. If it passed in its present form the proprietors of large establishments, having many branches, would be entirely at the mercy of their branch managers and assistants. When, however, hon. members talked of this Bill as a piece of class legislation, it would appear as if they wanted the House to suppose that bodies like the London Chamber of Commerce and the Manchester Chamber of Commerce were composed of farmers. He supported the Bill in the interests, not of agriculturists, but of fair trading. The necessity for it was to enable the working-classes to get the article for which they paid, and to prevent traders from defrauding them. The contention of the opponents of the Bill was that the consumer was well able to take care of himself, but he denied that this was the case. He pointed out also that there was power to stop milk in course of transit, and it was equally necessary that the public authority should have power to stop margarine and butter. He also drew attention to the apparent want of confidence shown by many of the public analysts in the country in the Government department. The effect of Clause 4 was that the Government laboratory would practically establish standards for each article.

Mr. LONG said that it was not proposed that the exact standard for each article should be laid down. With the Government chemist would be associated gentlemen able to give the best technical advice; and it was hoped that by means of such a body a common ground of agreement would be afforded for the Government chemist and the local analysts, between whom there had been a certain difference and jealousy. (Hear, hear.)

Mr. KILBRIDE said that he was glad to hear that the clause went so far towards carrying out the recommendation of the committee. The right hon. gentleman stated that the best margarine could be produced with from $2\frac{1}{2}$ to 6

per cent. of butter fat; then why was such a high limit as 10 per cent. named in the Bill? No matter what was said about making it more pleasing to the eye, the whole question of colouring margarine resolved itself into this—that it was sought by those who sold it to make it more easy to sell it as butter. So long as manufacturers had the power to colour margarine, so long would the door be left open to fraud. He regretted that the question of water in butter was not dealt with in the Bill. Great uncertainty prevailed as to what percentage of water in butter constituted adulteration, and a recognised standard should be established. With these few exceptions the Bill was an advance in the right direction, and legislation of this kind which benefited the consumers would also be an advantage to the dairy farmers. He regretted that the right hon. gentleman refused to have a sentence of imprisonment imposed after a third conviction for fraudulent adulteration. Fines had been found to be ineffective for that purpose, and he believed that a sentence of three months' imprisonment would do more to stop the selling of margarine as butter than the imposition of any amount of penalties in fines.

Mr. LOWLES (Shoreditch, Haggerston) said there were a hundred articles covered by the Bill besides butter and margarine, and he desired to say a few words on behalf of the retail dealer who sold those articles. It was becoming an increasing burden on the retail dealer to satisfy all the Acts of Parliament affecting him, and many members were pledged to see that he was not unduly harassed in his trade. (Hear, hear.) He hoped the right hon. gentleman would, in this Bill, continue to regard the production of an invoice stating specifically the nature of the article bought by the retail trader as sufficient indemnity to him in selling. He hoped, too, that the Bill would be amended so as to protect the employer who showed due care and diligence from suffering for the carelessness of an assistant. If the Bill was amended in these two particulars it would meet with universal acceptance on the part of the trades concerned. (Hear, hear.)

Mr. PHILIPPS (Pembroke) remarked that no one had described the Bill as a good measure, and the best that had been said for it was a kind of apology for what was assumed to be a step in the right direction. For his part he considered that the provisions should have been much more drastic.

WATER AT SPIRIT PRICES.

At Sevenoaks Petty Sessions, Robert Henry Marchant, landlord of the Cock Inn, Ide Hill, was summoned for selling adulterated brandy, on January 9th. Supt. Holman stated that the County Analyst had certified that the brandy in question was 1.38 below the legal limit. Mr. Terry, from the offices of Messrs. Palmer, Wardley, and Barton, solicitors, of Sevenoaks and Tonbridge, appeared for the defendant, and urged that there was no intention on the part of his client to sell spirits that were adulterated, and in the case of this brandy the adulteration had arisen through accidental circumstances. The Bench took into consideration the defendant's previous good character, and dismissed the summons on the payment of the costs, but the Chairman remarked that the police were quite right in bringing these sort of cases forward.

MARGARINE.

At West London, on February 28th, William Osborn, of Portobello Road, Notting Hill, appeared before Mr. Lane, Q.C., to answer an adjourned summons for exposing margarine for sale without a label, as provided by the 6th section of the Act.—Mr. Ricketts, on behalf of the Butter Association, appeared to support the summons; and Mr. Hanson defended.—An assistant to the association, named Annie White, asked for half a pound of shilling butter, and she was served by the defendant from a lump on a slab on the counter. The butter was submitted to an analyst, and was found to contain 70 per cent. of margarine.—The witness

was closely questioned by Mr. Hanson, and she said she saw the actual lump from which the margarine was taken. She handed the sample to Mr. Ward, the inspector of the association.—Mr. Ward, who said he was a pensioned detective-sergeant, also said he saw the lump of margarine.—For the defence it was argued that the lump could not be seen by a customer, and the defendant, on being sworn, said Mr. Ward could not see it.—Mr. Lane, Q.C., said he had no doubt that there was an intention to sell it for butter, and to impose on the purchaser, but he could not say that there was an exposure for sale.—In cross-examination the defendant said he could not say the witness asked for butter. He was generally asked for "half o' shilling."—Mr. Lane, Q.C., dismissed the summons, and ordered the defendant to pay one guinea costs, which had been incurred through the adjournment. He refused to allow costs to the defendant, and granted a summons against him in respect of the label in which the margarine was wrapped.

At Thames, on February 28th, Jules Bayard, 95, Grundy Street, Poplar, was summoned before Mr. Mead by Mr. J. Bullock, inspector under the Sale of Food and Drugs Act for the Poplar Board of Works, for selling butter adulterated with 88 per cent. of foreign stuff.—On the 10th inst. Mr. Bullock went into the defendant's shop and called for half a pound of 1s. butter. Bayard served him, and on the sample being analysed it was found to be adulterated as stated above.—Mr. Mead fined the defendant £10 and 12s. 6d. costs, or one month's imprisonment.

MILK.

At the Birmingham Police Court on March 2nd, before Messrs. Fisher and Tangye, William Marshall Payne, trading as the "Farmers' United," Main Street, was summoned for selling milk deficient of 28 per cent. of natural fat. Mr. Hiley prosecuted, and Mr. Philip Baker, who defended, stated that there had been a previous conviction against the "Farmers' United," and since then they had taken every precaution to ensure the delivery of genuine milk. They had obtained an agreement from the manager of the farm at Newport from whom they obtained their milk, one clause of which stated that Mr. S. E. Payne (manager of the Chetwynd Cream and Milk Company, Newport, Salop) would despatch the milk perfectly pure, free from any and every kind of adulteration, and with all its cream as drawn from the cow. On the particular can of milk in respect of which the present proceedings were taken there was a warrant that the churn contained new milk. The defendants had also taken the precaution to instruct Dr. Bostock Hill to analyse each week five different samples of their milk. Mr. Baker pointed out that the standard of purity adopted in Birmingham was higher than that of Somerset House, so that if the milk had been analysed there it would have been 9 per cent. instead of 28 per cent. deficient.—Witnesses were called to show that the milk was taken from New Street Station and emptied into the churns for delivery without having entered the premises, and was not interfered with in any way.—Mr. Fisher said that the Bench were satisfied that when the sample was taken the milk was not of the "nature, substance, or quality" demanded by the customer. It was quite clear that something must have happened to the milk between the times when it arrived and when the sample was taken. Defendant would be fined £10 and costs, or go to prison for one month.

ELIZA BRIDGENS, milk-seller, Gooch Street, was summoned for selling milk containing 16 per cent. of added water. Mr. Hiley prosecuted, and stated that there had been a previous conviction against the defendant, and at different times three people were fined who had purchased milk from her. To-day two other milk vendors were summoned who had purchased their milk from Bridgens, and in one case a guarantee had been given.—Mr. Fisher said that it was one of the worst cases they had had before them for a long time. The defendant not only sold adulterated milk herself, but supplied it to the smaller

dealers, who had to suffer. The Bench were determined to stop these offences, and defendant would be fined £10 and costs, or one month's imprisonment.

MARIA LAW, Vincent Street, was ordered to pay the costs for selling milk containing 12 per cent. of added water and with 22 per cent. of fat deficient. The defendant stated that she received the milk from Eliza Bridgens, who had given her a guarantee that the milk was new and pure with all its cream.

ELIZA ASHFORD, Cox Street West, was fined 5s. and costs for selling milk containing 12 per cent. of added water and with 18 per cent. of fat deficient. She said she had purchased the milk from Eliza Bridgens.

REPORT OF THE PURE BEER COMMITTEE.

THE majority report of this committee is essentially negative in tone, and states that the weight of evidence is to the effect that the disuse of malt adjuncts would not increase the demand for British barley; though, even if it did, they would hesitate to recommend any interference with the natural development of a great industry merely in order to benefit another special class of producers, however important. The committee reject the suggestion that beer brewed by the use of malt adjuncts or substitutes should be specially labelled, or that individual brewers should be compelled to publish a return showing the amount or proportion of materials of each class used, as they consider the former impracticable, and the latter an interference with business of an almost unique and rather invidious kind; and they submit that, if there were a large and genuine demand for all-malt beer, it would probably seldom be difficult for consumers to obtain it under guarantee. As to hop substitutes, they are satisfied that none which are deleterious are employed, and that in any case the quantity used is, and is likely to be, so small that the matter, whether from the consumers' or the hop-growers' point of view, is hardly worth the attention of the Legislature. They consider that the importance of soundness in beer, from the health point of view, is so great that it would be most unwise to prohibit or discourage the use of preservative adjuncts; and they are prepared, if it should be established that any particular preservatives are objectionable, to trust to the vigilance of the Inland Revenue authorities, who have full power to prohibit the use of "noxious or detrimental" materials.

Mr. Reade, in his minority report, suggests that separate columns for hops and hop substitutes should be inserted in the brewing-books, and the information furnished in the Parliamentary returns; but he considers that the use of such substitutes, if not prohibited, should, as recommended by the Hop Industries Committee of the House of Commons, be accompanied by a declaration. In summing up the whole matter, he declares that the evidence conclusively proves, in his opinion: "(1) That a beer brewed with substitutes cannot have the same composition as an article produced from malt and hops only; (2) that the use of substitutes, especially sugar, undoubtedly entails the introduction of substances foreign to normal beer, and often in very appreciable quantities; (3) that these substitutes may in some instances be injurious to health, and are certainly less nutritious and wholesome; (4) that beer made from malt and hops only is brewed by nearly half of the brewers in the United Kingdom (including such well-known firms as Guinness, Bass, Henry Lovibond and Son, etc.), and that, therefore, it is possible to produce the article desired by the consumer without the use of sugar or any other substitutes; (5) that the use of preservatives may be, and probably is in many cases, much abused; (6) that at present the public have no adequate protection against the use of deleterious substances in the manufacture of beer; and (7) that it would be neither difficult nor vexatious to enforce such legislation as would ensure to the purchaser his right, when he asks for beer—the national beverage—to obtain a beer brewed entirely from malt and hops.

WHAT IS FLOUR?

BEFORE Mr. Justice Lawrance and Mr. Justice Channell, sitting as a Divisional Court in the Queen's Bench Division of the High Court, on February 16th, the case of the Queen v. Perkins, Justices, and Messrs. J. J. and W. R. Mitchell (Limited) (ex parte Hennen), came on for hearing. Mr. Charles Mathews appeared for the appellant, and Mr. W. L. Bell for the respondents.—Mr. Bell said he appeared for the respondents, the Southampton Justices, to show cause why they should not state a case at the instance of the appellant, an inspector under the Food and Drugs Act. The facts were these: Messrs. Mitchell, of Southampton, were charged under Section 6 of the Sale of Food and Drugs Act for selling to the inspector an article of food not of the nature, substance, and quality demanded. The inspector went into the shop and asked for a quartern of flour, and he was supplied with something which, on analysis, turned out to contain 35 per cent. of maize flour and 65 per cent. wheat flour. The magistrates held that the inspector had got what he asked for, and they refused to convict, upon which Mr. Mathews obtained a rule calling upon them to show cause why they should not state a case. His (counsel's) submission on behalf of the magistrates was that there was no point of law involved at all. The questions which the magistrates would have to settle were these: First, What did the appellant demand?—and it was admitted he went in and asked for a quartern of flour simply. Secondly, What was he, in fact, supplied with?—he was supplied with the article above described. Thirdly, Was this stuff of the nature, substance, and quality demanded?—and that would involve an inquiry into what was the definition of flour, whether it was understood to mean flour made of wheat or any kind of flour. There was no evidence called to show that there was any special meaning attached to the term, but on one side the analyst was called for the prosecution, and on the other there was the magistrates' own general knowledge and the general definition of the term "flour" as contained in Johnson's dictionary. Mr. Justice Channell said even the dictionary did not support the contention that flour was to consist of two different kinds of grain. Mr. Bell submitted the question was one of fact for the magistrates. Moreover, he called attention to the manner in which flour was described in Section 2 of the Bread Act. That section said bakers might make bread out of flour or meal of wheat, barley, rye, oats, and Indian corn, which was maize, and that was a legal definition of flour as contained in an Act of Parliament. The magistrates said they would not state a case because there was no point of law involved. Without calling on the other side, their lordships said they thought the magistrates ought to have stated a case, and they made the rule absolute compelling them to do so. The question of costs was reserved.

TYPHOID AND BUTTER.

SOME experiments just reported by two of the Government chemists of the United States, Messrs. Balley and Field, serve to hammer home the supreme importance of vigilance in connection with the distribution and manufacture of milk and butter. The germ whose continued existence in cream and butter they were examining was the typhoid bacillus. Introduced directly into butter the germ of typhoid lived ten days, and a curious fact in connection with it is that if the butter-milk be thoroughly worked out of the butter the bacilli have no tendency to multiply. On butter-milk, apparently, they thrive fairly well. But a different tale has to be told with respect to cream, for which the bacillus shows a criminal preference. When cream is infected with typhoid bacilli before being churned into butter, the germs are found in the butter for three months afterwards, which is about the time that they will live in milk. The danger from milk can be overcome by boiling, for the typhoid bacillus has no taste for a temperature above seventy degrees Centigrade; but few people care to go to the extent of converting their butter into a beverage.

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SATURDAY, MARCH 18TH, 1899.

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THE HOUSE OF COMMONS' DEBATE ON THE NEW ADULTERATION ACT.

In the House of Commons on March 9th, Mr. Philipps (Pembroke), in resuming his speech on the motion for the rejection of the Bill, said that the measure would do very little to strengthen the law. The sale of margarine for butter was a very profitable fraud, and the penalties imposed by the Bill were insufficient to deter from it. Second and subsequent offences should be punished with imprisonment, and not with fine. He urged that the colouring of margarine to imitate butter should no longer be permitted. If, in consequence, the trade was destroyed, that would only tend to show that the margarine was largely fraudulent, and that margarine was largely sold because it

was yellow and because it imitated butter, and for no other reason. From his point of view this was a disappointing Bill, though it flattered the farmers with the idea that their interests were being looked after. Amendments would be proposed which would prevent margarine from being coloured yellow and being sold as butter, and by which fraudulent salesmen would be sent to prison instead of being fined. If those amendments were adopted, the Bill would do a great deal more in the desired direction than it would in its present milk-and-water form.

Mr. Grant Lawson (York, N.R., Thirsk) said the general principle of this Bill was that fraud should be prevented by a closer inspection of articles than was now made. They desired to make the inspection at the ports regular, real, and effective, and in regard to inspection at home they desired that the local authorities, where they needed it, should be galvanised into action by the central authority. With regard to the question of colouring margarine, some good would be done by the discussion if consumers realised that the natural colour of margarine was so odious that a man must close his eyes before he could get it comfortably down. But he did not think his right hon. friend the President of the Board of Agriculture could have gone on the line of prohibiting the colouring of margarine in order to prevent the sale of margarine as butter. All colouring of margarine was not done for fraudulent purposes. A good deal of coloured margarine was sold openly as margarine. There were few articles sold in their natural colours. He doubted, for instance, if any hon. member could tell what was the natural colour of his boots. (Laughter.) The natural colour of ginger-beer, was not the colour of beer, but the teetotaler was entitled to colour it like beer, and did colour it like beer, in order probably to deceive himself. (Laughter.) Therefore, it would have been a strong thing for his right hon. friend to have attempted to make laws on the subject of colouring. His right hon. friend proposed to proceed to the end they all had in view by inspection, detection, and punishment. He believed the Bill would do good to the producer, the retailer, and consumer, and he, therefore, supported it.

Mr. Kearley (Devonport) thought the criticism directed against the Government that they meant solely to serve the agricultural interest by this measure was suggested by the language which was employed in the drafting of the Bill. The day was gone by when any Government could pass a protective measure that would interfere with the free flow of food products into this country. But it was unfortunate that the Bill should appear to serve the interests of a section of the community that was somewhat suspect, at all events, in the direction of protection. He submitted that there should be no preferential treatment for agricultural produce liable to adulteration, but that the Bill should comprehensively deal with all articles of food in which adulteration existed or might exist. The right hon. gentleman in introducing the Bill said that it was based upon the recommendations of the Select Committee. That was technically true, because some of the provisions of the Bill were the recommendations of the Select Committee, but in the main he asserted that it did not follow those recommendations to the full extent. Out of twenty-three recommendations of the committee, the Government in this measure had ignored all but ten, those which they had passed over including some provisions which would have proved most beneficial. He therefore regarded the Bill as a mere instalment of the legislation necessary to give them effective protection against adulteration. Still, that was no reason why he should offer the Bill an uncompromising opposition, for its framework might be utilised for constructing a useful measure. In committee many suggestions could be made for amending the provisions, but the second reading ought not to be made an occasion for moving the rejection of the Bill. (Hear, hear.) The most serious omission from the Bill was the recommendation of the Select Committee, carried with absolute unanimity, that there should be set up an independent Court or body of reference to deal with the

technical and scientific questions that had to be considered in connection with food products. There was to be some body set up by the Board of Agriculture, but that Department, he contended, was not in a position to command the very best technical and scientific knowledge like a board would be that had an independent existence. It had been rightly said that to make legislation effective the law must be enforced. But in addition to enforcing the law deterrent penalties must be enforced. At the present time the law was not enforced as it should be, nor were the penalties sufficiently deterrent. The proposal in the Bill was that where the law had not been enforced and the interests of agriculture were affected the Board of Agriculture should step in and compel local bodies to act. He advised the Government to delete the language in the Bill which pre-supposed a predilection in favour of agriculture. These references carried not substance with them while they were a great disfigurement of the Bill, and would give rise to accusations against the Department which it would be best to avoid altogether. As long as the Board of Agriculture had the administration of this Act there would be an opening for the enemy to say that it was worked in the interests of agriculture. He did not allege that himself, but he did say that it was a pity, considering that the Local Government Board was the recognised central authority for dealing with local bodies, to transfer these powers to the Board of Agriculture. (Hear, hear.) As to the question of penalties he was distinctly in favour of having a minimum fine for the second offence, and for the third and subsequent offences he was of opinion that the Bill should give magistrates discretion to inflict the punishment of imprisonment. That was, he knew, a drastic proposition, but he believed the mere knowledge that there was such a power would act as a great deterrent to adulteration. (Hear, hear.) He thought the Government should also take powers in the Bill for the detention at the port of entry of goods about which there was any suspicion pending the result of analysis. As to "mixtures," he held the opinion that they were a fruitful source of adulteration, and he was in favour of denying the right of margarine manufacturers to mix butter with margarine at all. The Government had seen fit to allow an admixture of 10 per cent., but in his opinion that was too much to allow, and he was supported by the authoritative declaration of a well-known firm of high repute that butter-fat in margarine should not exceed three per cent. In committee, perhaps, the percentage might be reduced to five. On the question of "warranty" there would no doubt be much controversy. Under the Sale of Food and Drugs Act an invoice was not held to be a warranty, but under the Margarine Act, passed twelve years later, the reverse was the law. The invoice certainly should be the warranty, and the provision imposing on the trader the responsibility of making his consignor state in writing that the article is pure should not be persisted in. Again, the two Acts just mentioned differed in regard to a claim set up by a dealer that he had exercised due diligence and that his employé was the offender. What was the intention in the present Bill? Discretion might well be left to the magistrate to decide if due diligence had been used. Legislation on the subject would be more effective in the form of a consolidation Bill. He would like to see other Acts repealed and a thoroughly good Adulteration Act passed dealing on broad lines with all articles. The state of the present law was most confusing, even to the authors of the Bill. The clause in relation to "separated" or "skimmed" milk offered an illustration of this. The penalty for contravention of this provision was £2, but under the Sale of Food and Drugs Act the penalty was not to exceed £20, and he had known a fine of £10 imposed. Taking the Bill with all its faults he believed if the Government really meant business and would in committee give heed to suggestions founded on experience the Bill would be accepted by the country as a step in the right direction. (Hear.)

Mr. T. W. Russell (Tyrone, S.) said that, after the two speeches moving and seconding the motion for the rejection of the Bill, he did not think the Government had any

reason to complain of the reception afforded to their proposals. Criticisms had been directed against sins of omission rather than of commission. He thought that the tenor of the debate on the Bill as far as it went showed that, on the whole, it was a good Bill, and likely to prove of great use. The member for West Islington declared that it was a Bill designed to protect the agricultural community and raise prices. But the Cobden Club would hardly care to give rights to foreigners which were not given to home traders; and he believed that it was generally conceded that taking samples at the port of entry was a valuable proposal. (Hear, hear.) The chief difficulty, no doubt, was the defective administration of the law by the local authorities and magistrates. The local authorities in many cases administered the various Acts in a most perfunctory manner. In every case the shopkeeper who sold an adulterated article would produce his invoice, and the responsibility would be at once shifted to the wholesale people. But the wholesale trader might carry on his business in Ireland or Scotland, or hundreds of miles away. When he was brought into court he would, no doubt, produce the invoice from the manufacturer of the goods. Thus he would shift the responsibility on to the manufacturer. If not, why not? The manufacturer might be outside the jurisdiction, so that in that case nobody could be made amenable. Was it wise to run the risk of bringing the administration of the law to this pass? They must, in short, make a man responsible for the goods he sold. (Hear, hear.) As to margarine, whatever the mixture was of butter fat, it must be sold as margarine, and not as "tenpenny butter." (Hear, hear.) With regard to fixing standards, it was true that Clause 4 did not fix a standard for any article, and what was proposed only covered three articles—milk, butter, and cheese; but, looking at the enormous difficulty, if not impossibility, of fixing exact standards, was it not wiser to arrange, as the clause arranged, for a decision of experts that would establish, not an exact standard, but a presumption as to purity, leaving a certain elasticity to cover different cases? As to preservatives, the Select Committee arrived at no decision. They were not satisfied that preservatives were prejudicial to health, and they certainly did not believe them to be used fraudulently. Why, therefore, should their use be prohibited by the Bill? He did not believe preservatives did harm. He believed they were useful in legitimate trade, and the Government saw no reason for prohibiting their use. Coming to colouring, he contended that the artificial colouring of butter could not be stopped. Most, if not the whole, of the foreign butter in the English markets—and that was most of the butter used in this country—was artificially coloured. The colouring was not injurious to health, and to attempt to prevent the colouring of butter would rouse a storm of opposition, and be most unfair to traders. The penalties to be imposed under the Bill were said to be insufficient. Magistrates hesitated to inflict the present moderate penalties, and if those penalties were increased they would find means of dismissing the case. The question of penalties was for the committee to whom the Bill would be referred to consider, but the Government did not see their way to provide for heavier penalties than those mentioned in the Bill. It was said this Bill was not heroic legislation. Why should it be? He never knew a question on which there was less room for heroics of any kind. (Hear, hear.) Every speaker in the debate had admitted that the present law was good if only it could be better enforced. The object of the Government was not heroic legislation, but, first, the protection of the public from adulteration; secondly, not to interfere with legitimate commerce; and, thirdly, not to harass or annoy the honest trader. He believed the Bill fairly carried out that design, and therefore he hoped the House would pass the second reading. (Cheers.)

Mr. Bryce (Aberdeenshire, S.) said the Bill had been criticised from many points of view. The complaint that it did not go far enough and ought to provide for more severe restrictions and stringent penalties did not come from agriculturists only, and it was also contended that the

law as to adulteration needed consolidating. In his opinion, it would be better if the law were consolidated and the whole subject of adulteration dealt with on the same lines, and without giving special privileges to agricultural produce. While he did not think there was any large element of protection in the Bill, it was not altogether unnatural that that element should be suspected, because the President of the Board of Agriculture in introducing the measure had talked of the desirability, not of preventing deceit and fraud, but of securing honest competition. That was a subject with which the House was not at present concerned, and if the right hon. gentleman had based his case entirely upon the interests of the consumers, and had not thrown out to his agricultural friends the suggestion that this was a measure for their special benefit, he would have done a good deal to disarm the suspicion with which the measure was received by severe and stringent free traders. Another ground for suspicion was to be found in the words of Clause 2 of the Bill, that "the Board of Agriculture may, in relation to any matter appearing to it to affect the interests of agriculture in the United Kingdom," take samples of agricultural produce. In a Bill to prevent adulteration these words were not necessary even to define the scope of the action of the Board of Agriculture, and they seemed to suggest a motive and a reason for the intervention of that Board entirely apart from the interests of the consumer. Indeed, the substitution of the Board of Agriculture for the Local Government Board as the central authority charged with the administration of this measure was quite without justification on any ground of practical convenience. With regard to the main provisions of the Bill, so far as they tended to prevent fraud, he was heartily in favour of them. There was no relation at all between free trade and fraud. (Hear, hear.) Their motto ought to be everything against fraud; nothing against freedom. He was not satisfied with the provision against the manufacture of the margarine containing more than 10 per cent. of butter fat. There was already a law which prohibited the sale of that article except as margarine. This law should be enforced as strictly as possible, but why should people be debarred altogether from buying a mixture that was something better than ordinary margarine though not as good as perfect butter?

Mr. Long said there was no merit in the mixture of margarine and butter over the best natural margarine produced under this limit of 10 per cent. This was the opinion of one of the first margarine manufacturers of the country, and was confirmed by experts.

Mr. Bryce was glad to hear that statement. He now understood that this butter atmosphere, this persuasion that one was really eating butter, was attainable with something less than 10 per cent. of butter fat, and therefore the consumer would not be in any way prejudiced. To some extent, therefore, his objection was met, but at the same time the prohibition of any article seemed to him to become dangerously near an interference with trade. As to the question of invoices, he did not understand how under Clause 17 an invoice could fail to be substantially a warranty.

Mr. Long explained that under the Food and Drugs Act an invoice was not a warranty, while under the Margarine Act it was, and that the Government did not propose to repeal either provision, but to leave the law exactly as it was.

Mr. Bryce said the clause was an illustration of the difficulty caused by incorporating other statutes in such a measure as this. Nothing was more likely to give rise to litigation, and he hoped that in Committee the clause would be amended so as to say what it meant. It had been said there would be difficulty in obtaining convictions; but surely, in these cases, the source of the evil and the person they chiefly wanted to get at was the manufacturer or wholesale dealer.

Mr. T. W. Russell said the question would arise whether the goods supplied to the public by the retail dealer were in the same condition in which they left the manufacturer. His contention was that the Court and the

local authority would be so discouraged that prosecutions would cease altogether.

Mr. Bryce said he would have thought that in that case the *onus probandi* would rest with the manufacturer. He regretted that the Government had brought forward the Bill so very soon after it was printed. Great interests were at stake, and he suggested that the measure should not be sent into Committee at once, so that ample time would be given for representations to be received from the country. In conclusion, he expressed the opinion that the measure was defective, but added that he had not been convinced by anything that had been said that it was so bad that it should not go to Committee. (Hear, hear.)

Mr. Lopes (Grantham) regarded the Bill as an essentially useful and practical measure, and as amounting to an honest endeavour on the part of the Government, not merely to put an end to the unfair competition between the adulterated produce and the real and genuine article which had acted so prejudicially to the interests of traders and farmers, but to put down, as far as possible, the whole system of adulteration, which was most prevalent, and which had done so much injury to the interests of the whole community. The hon. member for Islington had moved the rejection of the Bill mainly on the ground that it was, according to his view, a protective measure in the interest of agriculture. If it was a protective measure at all, it was protective, not only in the interests of agriculturists, but also of the traders and the general consumers. Again, some members had said the Bill was not drastic enough, but others had contended it was far too drastic. He ventured to think the right hon. gentleman had steered between the two extremes, for, while every reasonable precaution was taken that the trade of the country should be conducted upon sound, honest, and upright principles, the measure would not unduly harass any legitimate interest or put an end to any lawful trade. He believed the Bill had good prospects of success in view of the powers taken by the Board of Agriculture to initiate proceedings themselves and to exercise authority over defaulting local bodies. He supported the Bill because he believed it was an honest, practical, and genuine attempt on the part of the Government to put down adulteration, did not harass or vex any industry, and furthered the interest of the whole community. (Hear, hear.)

Mr. G. Whiteley (Stockport) congratulated the right hon. gentleman the President of the Board of Agriculture on having evolved a Bill which was an honest and fair attempt to keep an even keel between all interests. He was bound, however, to say that he listened to several phrases which fell from the Secretary to the Local Government Board with very great alarm. He regarded the Bill as a compromise to which both the agricultural interest and the distributing and producing interests had contributed. The agricultural interest had failed to obtain the prohibition of the colouring of margarine, while the distributing and producing interest were prohibited in future from producing the higher classes of margarine. No one bought margarine when he could buy butter, but the poor class of customers were now prohibited from purchasing the better classes of margarine. Was the House going to take the grave decision that the only class of margarine which the poor should be enabled to purchase was one which was as low as could be manufactured, and that the consumers must be contented with that? In his judgment that would be a monstrous decision. As a whole he looked upon the Bill as an honest and fair attempt to reconcile all differences, and he hoped it would pass into law.

On the return of the Deputy-Speaker after the usual interval,

Count Moore (Londonderry) said perhaps the House would be good enough to allow him to say a few words, as he had been the originator of all the legislation which had taken place on this question, having had the honour eighteen years ago to introduce the first resolution which dealt with it. Almost every Government in Europe had taken very strong action in regard to this matter. They had been told that this was legislation in favour of a particular class, but it

was well to remember that we paid last year sixteen millions sterling to foreigners for our butter imports. What was desired was to raise the standard to the highest level possible, and they did not want to spare fraud at home any more than fraud abroad. There was one point which had hitherto escaped criticism, and that was the question of registration, which was not altered by the present Bill. He could answer for what happened in Ireland, and he was sure the same was the case, more or less, in this country, namely, that registration never had been and never would be carried out unless strong measures were taken to enforce it. The margarine trade was a very profitable trade, and spent large sums of money in its own defence. It was useless to inflict fines, because it was perfectly notorious that the fines of the retailers were paid by the association out of a joint fund. It was also useless to expect the local authorities to act in this matter, because some of the members of those local bodies might be engaged in this profitable business.

Mr. T. W. Russell pointed out that Clause 3 provided that where a local authority failed to carry out the Act the Board of Agriculture could carry it out for them.

Count Moore said the Board of Agriculture had no power to register; only the local authority could do that. The Board of Agriculture could not move against a manufacturer of margarine unless he was declared and known to be a manufacturer of margarine, and he could not be declared and known to be a manufacturer of margarine unless he was registered as such. It was useless to increase the power of the Customs unless they were going to close the door by which these fraudulent butter substitutes might come from the manufacturers. Was this Bill going to be enforced? There was a perfect army of officials under the Act of 1887, and what was the reason why none of them had done anything? What guarantee was there that this Bill was going to be worked? He was not opposed altogether to the provision for fixing a standard of purity, but it was matter of great importance, and would require to be carefully examined, otherwise injury might be done to the people still engaged in the Irish salt butter trade. This was not the time for the jibes and jeers they heard on the side of the House on which he sat. Agriculture was in a disgraceful condition in this country, and now they had established a Board of Agriculture they should not throw mud at it, but should support it and endeavour to make it a thoroughly efficient department. He hoped that the Bill would be strengthened in accordance with the recommendations made from that side of the House.

Mr. Ascroft (Oldham) said he assumed that the object of this Bill was, first of all, to stop the introduction into this country of adulterated produce. If that object was to be achieved they must strengthen the Bill, so that when, upon analysis, adulteration had been discovered the goods could be detained until judgment had been delivered, and then if adulteration had been proved they should be confiscated. They would not stamp out adulteration by punishing the small retail shopkeepers. They must get rid of the great syndicates that sent these goods over to this country. It was said that these people could not be got at. The invoice of the small trader showed the merchant from whom the stuff was obtained, and he could be prosecuted. If that were done, the shopkeeper would not buy again from the merchant, and the merchant would tell the foreign manufacturer that he would have nothing more to do with his rotten stuff. He also thought the assistant who discharged the orders of his employer and sold margarine as butter should be liable, as he was under the Margarine Act, to prosecution. If that were done, it would be the greatest possible check on fraud, for it would turn every shopman into an amateur policeman, who would take care that the articles he sold were not adulterated. In the third place, he thought prosecutions ought not to be conducted under the Food and Drugs Act when there was an Act specially drawn to meet such cases in the Margarine Act. Unless the Government agreed to send the Bill to committee with an open mind, ready to settle these and other questions as was best in the interests of the country, he would be compelled, as the representative of a con-

stituency in which there was a large number of retail dealers, to vote against the Bill.

Captain Donelan (Cork, E.) said that probably no country was more interested in preventing frauds in connection with the sale of butter than Ireland, because, owing to British misgovernment, the production of articles of food was the only industry left to that country. Therefore, as a representative coming from the great butter-producing province of Munster, he welcomed the Bill as a step in the right direction, but he did not think it went far enough. He thought the colouring of margarine to look like butter ought to be prohibited. It was said that, if that were done, the colouring of butter should also be prevented. But butter was coloured because it was the fashion. It might be compared to the putting on of a little rouge to improve a lady's complexion. (Laughter.) On the other hand, the colouring of margarine was like putting on a mask to hide the face altogether. Margarine was coloured to look like the best grass butter. It was bought as such by unfortunate people, who if they were not poisoned altogether were satisfied. (Laughter.) It was hard enough for Irish farmers in the present day to struggle against honest competition without having to fight against fraud; therefore the more stringent the provisions of the Bill were made in the direction of preventing adulteration or spurious imitations the better would Irish farmers be pleased. (Hear, hear.)

Major Rasch (Essex, S.E.) regarded the Bill as far the best of the kind that had been introduced during his Parliamentary experience. While admitting that the Minister for Agriculture deserved the utmost consideration from the agricultural interest for having introduced the Bill, he could not go so far as to say his agricultural friends were satisfied with it. (Laughter.) They seldom were. (Renewed laughter.) Their interest centred round the question of margarine. They would wish margarine to be left in its natural state, or to be coloured blue, black, or green, or some other colour than that used now. But he thought it practically impossible to do that, because if it were done it would, of course, kill the margarine trade. When they allowed people to drink what was called British port and British sherry, to eat "filled" cheese, or drink milk fortified with boracic acid, it would be hard to penalise people who desired to eat margarine as a cheap substitute for butter, and one which did no harm to health. (Hear, hear.) He thought the agricultural interest could in this matter afford to be generous, and he would advise his agricultural friends to thankfully accept the very considerable half-loaf which the Minister for Agriculture had given them, and which was a good deal better than no bread at all. (Hear, hear.)

Captain Sinclair (Forfar) contended that the Bill had been regarded from the very first as a measure chiefly designed to protect the interests of agriculture. ("No, no.") The Bill was a distinct departure from the two principles which had distinguished all previous legislation on the subject. These principles were, first, that if an article of food was injurious to health it should be, *ipso facto*, criminal to sell it; and, secondly, if it was not injurious, but was sold, it should be labelled and known for what it was. No one could assert that margarine was unwholesome or injurious to health, and he therefore failed to see how the Government were justified in going beyond the two principles to which he had referred. He objected to the Bill because it very seriously interfered with the work of local authorities. He thought it showed great impatience on the part of the Government to seek powers to override these authorities. It was a short cut, but it might prove to be the longest way round in the end. It deprived the local authorities of responsibility in the matter, and it centralised the administration of the Government to an extent which he did not think was justified.

General Laurie (Pembroke) thought the objects of the Bill had been aptly described as inspection, detection, and punishment. But the desire of the local authorities to secure the first two objects was frustrated by their inability to obtain the third. It was absolutely impossible for the local authorities to efficiently administer the Acts so long as

magistrates imposed the ridiculously inadequate fines they were so frequently in the habit of imposing. (Hear, hear.) It was not merely a question of margarine; it was not merely a matter of dealing with imported articles; it was a question of adulteration after goods got into the hands of the distributor. The local authorities had attempted to enforce the law, but it was absurd to expect them to go into Court and incur heavy costs to see a fine of a shilling imposed.

Mr. Balfour appealed to the house to bring the discussion to a close. He had followed the debate, and he gathered that the views of the House, whatever they might be as to particular clauses, were strongly in favour of the Bill. Of all the speeches made, not one, he thought, had been directed against the main principle of the measure, unless he excepted the speech of one of the Glasgow members. Under these circumstances, he thought it was not unreasonable that he should ask the House to read the Bill a second time, and allow it to go to the Grand Committee. An appeal had been made by a right hon. gentleman opposite, who said with great force that it was only right that the country should have a chance of knowing what the Bill was. The Government felt strongly that the Committee stage should not be unduly pressed, but he thought it was generally agreed that they should now take the second reading of the Bill. (Hear, hear.)

Mr. Dillon thought it was too serious a bill to send to a Grand Committee. The Bill did not satisfactorily deal with adulteration by water. In justice to the Irish trade in salt butter, a well-known article of commerce, and in which of necessity there was water, and that with no intention of fraud, this point should be clearly defined. If the Government insisted on sending the Bill to the Standing Committee he hoped a full representation of the industries affected would be added to that committee.

Mr. W. Allen (Newcastle-under-Lyme) protested against the allegations of fraud directed against the manufacturers of margarine, and declared that the provision requiring that margarine should contain not more than 10 per cent. of butter would destroy the trade in the English article, which contained from 25 to 50 per cent., and would encourage the trade in the poorer, cheaper class of foreign margarine.

Sir J. Leng (Dundee) recommended that the Committee stage of the Bill should be taken in the House. Under the Margarine Act there was ample protection for the poor. In Scotland any attempt to override and coerce the local authorities would raise a feeling which it would be difficult to resist. Why was there not legislative interference to fix the proportion of malt and hops in beer and the mixture of cotton and linen, flax and jute, and silk and cotton? They would establish a precedent for mischievous and meddling interference with legitimate business. This was a small Bill, but it contained elements of great importance, and unless it was discussed in Committee of the whole House he should support the amendment.

Mr. Balfour moved the closure. (Cheers.)

The House divided, when there voted—

For the Closure	...	...	164
Against	...	...	55
Majority	...	...	109

The House then divided on the amendment, when there voted—

For the Amendment	...	...	18
Against	...	...	212
Majority	...	...	194

The Bill was read a second time, and

Mr. Long moved that it be referred to the Standing Committee on Trade.

Mr. Balfour moved, and it was resolved, that the debate should be adjourned.

WATER AT SPIRIT PRICES.

At Loughborough Petty Sessions, William Winterton, licensed victualler, the "Red Lion" Inn, Loughborough, was summoned for selling adulterated gin on February 10th. Mr. Deane, jun., appeared for the defendant, and pleaded guilty. Deputy Chief Constable Smith deposed to instructing an officer to purchase a pint of gin from the defendant, which was sent for analysis in the usual manner. The certificate received in return from Dr. Dyer showed the gin to be 8 degrees below the legal standard, the sample containing 26·8 of absolute alcohol. A fine of £2, costs included, was imposed.

At Swansea Police-court, on March 7th, John Ball, late of the Druids' Arms, New Orchard Street, was fined £3 and costs for selling whisky 30¼ degrees under proof;

MARGARINE PROSECUTIONS.

At Manchester, on March 8th, John William Tomlinson, Goodier Street, for exposing for sale margarine unlabelled was fined 2s. 6d. and costs, and Frederick George Mason for a similar offence, fined 10s. and costs; John Bibby, of 199, Prince Street, was fined 20s. and costs for selling margarine in unmarked wrapper; and for a similar offence Mary Collier, of 61, Blackthorn Street, was fined 20s. and costs; Harry and Fred Pigott, 37, Ashton Old Road, was fined £5 and costs for exposing for sale margarine unlabelled.—Mr. Superintendent Rook, Sanitary Department, Town Hall, prosecuted on behalf of the Corporation.

For selling butter heavily adulterated with margarine, Charles Bellers, of High Street, Stratford (who had been previously convicted), was fine £10, with 17s. 6d. costs, at West Ham on March 8th, and Frederick Massie, of 2, Stanley Road, Stratford, £4, with 17s. 6d. costs.

At Greenwich, Mary Slade, of 76, Kerry Road, Deptford, was summoned by the Greenwich District Board of Works for selling as butter an article containing 70 parts of margarine and fined 40s. and 2s. costs

At North London on March 13th, Edward V. Puzey, butterman, of Morpeth Road, Bethnal Green, and Andrew Reed, of Gore Road, Victoria Park, were summoned for selling butter which respectively contained 60 and 70 per cent. of foreign fat.—The defence raised in each case was that a mistake had been made, but Mr. Fordham said it had never yet come to his knowledge that butter had been given when margarine was asked for. It was a cruel fraud on poor people, and he should do all in his power to stop it. He fined each defendant £10, with 12s. 6d. costs.—The fines were paid.

MILK OF SULPHUR ADULTERATION.

At Barnsley, on March 13th, George Wood, shop-keeper, Barugh, was charged with selling adulterated milk of sulphur.—Mr. J. Carrington, for the defence, said there had been a new issue of the British Pharmacopœia, which changed the form of preparation of milk of sulphur, and the West Riding solicitor, understanding that little shop-keepers could not know of this change, had agreed to withdraw the charge on payment of costs.

THE TRADE IN ROTTEN TINNED MEATS.

At the Lambeth Police Court on March 9th, Frederick Gordon Hartridge and Granville Hartridge, trading as "Hartridge Brothers," at Penarth Street, Old Kent Road, were summoned, before Mr. Hopkins, to answer the complaint of Inspector Homer, on behalf of the Camberwell Vestry, that on the 20th February last they had deposited on their premises for the purpose of preparation for sale a quantity of meat, to wit, certain putrid sheep's hearts, fifty-six large tins of potted meat, eight hams, and a tray containing pieces of putrid meat and poultry bones, which was unwholesome and unfit for the food of man. There was a second summons against the defendants for having on the 20th February deposited at their premises for the purpose of sale 5,000 small tins of potted meat which were unwhole-

some and unfit for food. Similar summonses had been issued against each of the defendants individually.

Mr. G. W. Marsden, solicitor to the Vestry, appeared in support of the summonses, and the defendants were represented by Mr. Edmondson, barrister.

Inspector Homer stated that on February 20th last he visited the premises of the defendants, who were manufacturers of tinned meats. He saw Mr. Granville Hartridge, and told him who he was. He went round the place, and adjacent to a chopping machine he found a tub of sheep's hearts which were stinking and green and in a slimy state. He also found a tin containing cooked stuffed sheep's hearts, which were also in a disgusting condition. On the floor, by the side of the hearts, were eight hams in a perfectly rancid condition and totally unwholesome. There was a box containing 17lb. of bacon trimmings which were also rancid, and there was a bundle of the same material, weighing 8lb., in the same condition. He also found a tray of chopped flesh of some description, weighing about 15lb., smelling badly, and a pan containing 40lb. of mincemeat of some description, also smelling badly. He also saw fifty-six 7lb. tins of meat of some description. The whole of the tins were unlabelled. At his request Mr. Hartridge opened some of them, and three of them turned out to be putrid.

Mr. Hopkins: How many tins were opened?

Inspector Homer: Three were opened on the premises.

Mr. Marsham: All three were bad?

Inspector Homer.—Yes, sir. The articles he seized were brought to this court and condemned by Mr. Denman, the then sitting magistrate. He subsequently paid a second visit to the defendant's works, and in the chimney-shaft found a number of tins, and a lump of meat partially consumed, and a quantity of sheep's hearts. He seized 5,000 small tins of potted meat. Some of the tins were opened at the vestry's dépôt, and, when subjected to the heat test, they gave off an offensive smell, although they were very highly spiced. All the tins were doubly "pricked." Some labels were handed to him. Amongst others were "Turkey and Tongue" and "Tongue and Ham."

In answer to the magistrate the witness explained that tins were reprimed after they had become "blown."

Mr. Hopkins: You mean that the stuff inside gives off gas, and has to be let out and the tin resoldered.

Inspector Homer assented.

Mr. Marsden: Upon the whole of these premises did you find a single piece of good meat?

Inspector Homer replied that he seized the whole of the raw material that he found.

Mr. Edmondson submitted the inspector to a long cross examination, and elicited that the whole of the tins seized were not examined separately. Out of the 5,000 tins 25 were opened and were found to be wrong.

Further evidence in support of the summonses was given by Dr. Francis Stevens, medical officer of health for Camberwell, and Inspector Chadderton, one of the sanitary officers in the service of the Vestry.

Mr. Edmondson, in addressing the Court for the defendants, said his defence was that all these things were absolutely sound, and that the officer had made a mistake. In reviewing the evidence, which had been given in detail, the learned counsel said the inspector was mistaken in saying he saw some chicken bones on the defendant's premises. He was in a position to disclose a trade secret. Although these things were called chicken and ham and tongue, there was no chicken in it at all; it was all in the flavouring. (Laughter.)

It transpired that two medical men who were required as witnesses for the defence were not in attendance, and

Mr. Hopkins thereupon acceded to Mr. Edmondson's request for an adjournment. His worship said he should require the defendants to each find a surety in £50 for their appearance next week. Bail was tendered and accepted.

MEAT.

At Birmingham on February 28—before Messrs. A. Chamberlain and Williams—the Swift Beef Company were summoned for exposing for sale ten carcasses of pigs which were unfit for food. Mr. Hiley appeared for the prosecution; and Mr. Cross defended.—The company rent two stalls in the Birmingham Meat Market, and on the 27th of January Meat Inspector Hothersall visited the stalls at a quarter to nine in the morning, and found hanging at one stall the carcasses of four American pigs, and at the other the carcasses of six American pigs, which were unfit for food.—Mr. Parker, veterinary surgeon, stated that the ten carcasses were bad. Two of the pigs had evidently died from a natural cause, and one had been suffering from jaundice.—Dr. Hill also gave evidence that the ten pigs were unfit for food.—Mr. Cross contended that it was not the intention of defendants' manager to sell the pigs. They had only just been delivered by the railway company, and there had not been sufficient time even to take the cloths off the carcasses and examine them.—Arthur Wenham, the manager of the company, said he called Mr. Hothersall to look at the bodies of four pigs which did not quite satisfy witness. They had been purchased by a customer, but witness would not allow them to be taken away until they had been examined by the inspector. Witness denied that one of the pigs had suffered from jaundice.—The magistrates said they should fine the defendant £10 in respect of each of four of the carcasses. They would express no opinion with regard to the other six carcasses, as they thought that the fine with regard to the four would sufficiently meet the case.—During the hearing the Bench expressed the opinion that all goods hung on the stalls must be presumed to be exposed for sale.

PHILIP DANFORTH ARMOUR, Jonathan Ogden Armour, and Philip Danforth Armour the younger, trading as Armour and Co., were summoned for exposing bad pork and bad pigs' livers for sale.—Inspector Hothersall stated that he visited defendants' stall in Smithfield Market, and found a loin and two sides of chilled American pork, which were bad, exposed for sale amongst good meat. He also found a quantity of pigs' livers in a box in front of the stall, and nine were bad, being diseased with tuberculosis.—Mr. Twigg, the defendants' manager, said that the livers were not intended for sale. It was customary to examine all livers, throw aside those that were bad, and have them removed by the inspector. His instructions from the company were very explicit on the question. He was at once to notify the inspector of any meat that appeared doubtful, and have it examined.—Defendants were fined £3 in regard to each of the twelve pieces (£36 and costs in all).—The Bench said that during the hearing of the cases there had been some suggestion of the Corporation taking responsibility about the meat, but it must be understood that the sellers themselves were the only responsible people.—Mr. Hiley said that the Corporation took no responsibility in the matter.

GOLDEN SYRUP.

At Porth Police-court on March 2, Evan Parker, grocer, Ferndale, was summoned for selling adulterated golden syrup. This was the first prosecution of its nature in the county.—Superintendent Coles, Pontypridd, conducted the prosecution, and said that on the 17th ult. he visited the defendant's shop, and purchased a box of golden syrup. He sent it to be analysed, and the return showed that it contained 78 per cent. of glucose sugar, which was cheaper by 4s. per cwt. than cane sugar, with which it ought to have been made.—Defendant was fined 10s. and costs (£1 11s. 6d.).

MARY E. JONES, grocer, Tylorstown, was summoned for committing a similar offence.—Superintendent Coles deposed to purchasing a box of syrup, for which sixpence was paid. Analysis showed it to contain 60 per cent. of glucose sugar.—Defendant was ordered to pay the costs (£1 11s. 6d.).

DRUG ADULTERATION PROSECUTIONS.

At the Skipton Petty Sessions, on March 11th, Charles Wade, manager of a co-operative store at Silsden, was fined 20s. and costs for selling adulterated sweet nitre and camphorated oil.—William Mason, grocer, of Silsden, was fined 5s. and costs for selling adulterated camphorated oil.—William Lister Leake, grocer, of Silsden, was also fined 5s. and costs for selling adulterated sweet nitre; and William Mitchell, grocer, of Silsden, was fined 1s. and costs for selling adulterated camphorated oil.

At Ilkeston Petty Sessions Francis Girling, general dealer, of Sandiacre, was summoned at the instance of Capt. Sandys, inspector under the Food and Drugs Act, for selling, on the 11th January, to Joseph Hewett, county sanitary inspector, 12oz. of camphorated oil, not of the nature, substance, and quality of the article demanded.—Mr. White, county analyst, stated that camphorated oil should be composed of olive oil and camphor—4oz of olive to 10z. of camphor. There should be $21\frac{1}{2}$ oz. of camphor in the article; but in the sample in question there was only $9\frac{1}{2}$ per cent. of camphor—a deficiency of over 50 per cent. In the sample he analysed there were only 10 parts of olive oil present, along with 80 parts of common mineral lubricating oil, worth 1s. or 1s. 4d. per gallon. Fined 20s., and £1 2s. costs.

At the North London Police-court, on March 13th, May's Drugs Stores (Limited), of Winchester House, Old Broad Street, were summoned at the instance of the Hackney Vestry for selling sweet spirits of nitre which was deficient in its essential spirit (ethyl nitrite) to the extent of 65 per cent.—Mr. Abinger (instructed by Messrs. Rawlings) appeared for the defendants; Mr. Tiddeman prosecuted for the vestry.—The sample in question was purchased at the branch depot of the company, in High Street, Stoke Newington. The report of the public analyst was not disputed, but the defence raised by Mr. Abinger was that the spirit quickly lost strength, and he contended that as the sample was divided into large white glass bottles, giving full exposure to the light and to a considerable volume of air, this process would go on very quickly, and before the sample could be analysed it would have lost the amount of strength indicated. The proper way to keep spirits of nitre was to confine it in blue stoppered bottles, and place it in a dark place. A number of chemical experts were called in support of this contention, and Dr. Henry Wilson Hake, lecturer on chemistry at the Westminster Hospital, spoke to making a number of experiments which showed how quickly the spirit would evaporate unless properly treated. Ernest Owen, chemist by examination, said that he served the sample to the inspector, and subsequently sent another sample from the bulk, which was analysed and found to be of the required strength.—In reply to the magistrate, however, the witness admitted that he kept the bulk of the spirit in a dark cellar. He put small quantities into a clear glass bottle on a shelf in the shop fully exposed to the light, and it was from this bottle that the sample was served.—Mr. Fordham said that the defence left it open to him to come to the conclusion that evaporation had taken place in the shop. It was a serious matter to sell drugs which were only half the value of the article asked for, and he should impose a fine of £10, with £2 2s. costs.—Mr. Abinger said that his clients would appeal.

PRESERVATIVES IN MILK.

SIR JAMES VAUGHAN sat specially, on March 2nd, at Bow Street Extradition Court, for the further hearing of two summonses which came before him when sitting at Westminster on Thursday, February 16th. These summonses were issued at the instance of the Vestry of St. George's, Hanover Square, against milk vendors for supplying milk adulterated with borax (boric or boracic acid). Mr. Caulthorpe Munroe (instructed by Messrs. Capron and Co) supported the summonses on behalf of the vestry. Mr. Ricketts, solicitor, defended. The first sum-

mons. which was issued under section 27, clause 3, of the Food and Drugs Act, 1875, charged Messrs. M. and C. Heanley, wholesale milk vendors, of Stamford Street, with having furnished with milk supplied by them to Miss Walker, of New Street, Brompton Road, a warranty which certified the milk as genuine when it, in fact, contained 0.0264 per cent. of boric acid (equal to 33.74 grains per gallon). Mr. Ricketts cited the decided case of "Derbyshire v. Houlston," heard in the Queen's Bench, 1897, to show that the defendants were not liable under this summons, the farmer who supplied them with this milk never having disclosed to them the fact that he used any preservative in his milk, and their own analyst, who had analysed this milk on several occasions, having always certified it as genuine milk of good quality. Mr. A. J. de Hailes, of Redwood and de Hailes, analysts, Red Lion Square, said that he had analysed a portion of the milk in question and found it to be of good quality. He did not state the quantity of boric acid in this milk, as he did not regard this as an adulterant. It was, in fact, quite harmless. In cross-examination the witness denied that he had ever said that unless milk was obtained fresh from the cow it was improved by the addition of boric acid, but he did say that it was better to drink an infinitesimal portion of boric acid rather than a multitude of microbes. It was absolute nonsense to say that boric acid would give stale milk the appearance of being fresh or conceal its quality. He did not dispute Dr. Corfield's statement that boric acid might produce skin disease—many things might do so if taken in sufficient quantity—but he denied that the small quantity contained in this milk materially interfered with digestion. It made no difference up to five per cent. Mr. Charles Edward Cassal, public analyst for the vestry, called by Mr. Munroe, said that the amount of boric acid in the milk was injurious in that it prevented the decomposition of the milk, and, as the milk should decompose during digestion, it retarded the process of digestion. It did enable stale articles to be palmed off as fresh. The use of boric acid was prohibited in Germany and Holland in articles intended for home consumption. It did not matter about those to be sent abroad. The witness said that he knew that boric acid was largely used in Ireland in milk, butter, bacon and hams; in fact, it was in general use when not stopped by prosecutions, though it was very well known that it often caused injury to the health. You say it causes injury to the health. How do you know that? Have you ever tried the effect upon any child or adult person?—No, certainly not; vivisection is not allowed in England. (Laughter.)—Mr. Board, a farmer, of Pylle, near Shepton Mallet, who supplied the milk, said that he had been in the habit of putting a preservative in the milk which he sent to London for twenty years. He made this preservative himself as follows: 12 lb. sugar, 6 lb. carbonate of soda, 6 lb. borax, eighteen to twenty gallons of water, and put one pint in each churn.—Mr. Munroe: A good stiff dose that. Did you ever tell your London customers that you dosed the milk in this way?—No, sir.—Then, supposing they wanted to preserve the milk, there was nothing to prevent them adding another good stiff dose?—I suppose not. (Laughter.)—Mr. Munroe submitted that the case relied upon by Mr. Ricketts was far from being on all fours with the present case, inasmuch as there the defendant had received a warranty with the goods which he sold, and therefore had every reason to believe that what he stated was true; but, on the other hand, a man who took upon himself to state a thing as true without first satisfying himself that such was the case was held both in civil and criminal law to have been guilty of a false statement. Sir James Vaughan said that he could not agree with the learned counsel that the defendant had not taken reasonable means to satisfy himself before giving this warranty for the milk, and, in view of the decided case cited by the defence, he must dismiss the summons. It would, of course, be an important thing to

have that decision reviewed, but, as the law stood, he had no alternative than to dismiss the summons.—Mr. Munroe: Then I take it that if I can see my way to getting this case reviewed you will allow me to have a case stated?—Sir James Vaughan: Oh, certainly.

The second case was a summons against the Belgravia Dairy Company (Limited), of Exhibition Road, South Kensington, for selling skimmed milk from a street barrow sent out from their branch in Warwick Street, Pimlico, the milk, which was sold at 1d. per pint, containing 0.0226 per cent. or 16.30 grains per gallon of boric acid. Mr. Ricketts, for the defence, while denying that the company had used or authorised the use of this preservative, called Mr. Septimus Gibbon, for forty years medical officer of health for the Holborn district, and Dr. W. R. Smith, professor of forensic medicine at King's College and medical officer of health for Woolwich, who agreed that boric acid, unless taken in very large quantities, was not injurious to health; but, on its being stated that a committee of the Local Government Board had reported upon the use of this substance, Sir James Vaughan further adjourned the case that this report might be put in evidence. At the adjourned hearing on March 6th, Sir James Vaughan said that, having regard to the conflicting nature of the evidence given before him on the last occasion, he must dismiss the summons, as there was no definite evidence that the substance in question was injurious.—On the application of Mr. Munroe, the magistrate consented to state a case, and declined to allow the defendants costs.

MAIZE IN SELF-RAISING FLOUR.

MR. ALFRED HILL, the Birmingham Medical Officer of Health and City Analyst, has communicated the following observations on the use of maize in self-raising flour, to the local representative of *The British Baker*:

"The different opinions voiced by the grocers and the bakers on the question of putting maize flour into self-raising flour are calculated to confuse the issue, and leave the public to imagine that there is nothing more in the matter than a mere academic point which is not worth troubling about. It is, however, a very serious matter, and the Birmingham authorities are awaiting with keen interest the result of the cases which are now before the Court of Appeal. The grocers ask to be allowed to sell self-raising flour containing 5 per cent. of maize flour. Why the grocers, who do not manufacture self-raising flour, should go out of their way to advocate the use of what is, in my opinion, an unnecessary ingredient in self-raising flour, I do not know. It is not a case of permitting the addition of maize-flour to the extent of 5 per cent.; there is a tremendous principle underlying the matter. If you sanctioned the use of 5 per cent., it would get to 10 per cent., then to 20 per cent., and even to 50 per cent.

"I have, in my laboratory, at the present time, a sample of self-raising flour purchased in Birmingham, and my analysis shows that it contains as much as 40 per cent. of maize flour. Would it be contended that that was put in for expediency only? As a matter of fact, it is not necessary to put maize flour in at all, and I have, in my possession, a letter from what is perhaps the largest self-raising flour firm in the kingdom, and they positively state that they have never used maize flour, and that all that is requisite is wheaten flour and the proper chemicals. In proof of that, there is self-raising flour in the market which does not contain maize or other flour than wheaten. Why, then, should one section use it—and add it in very considerable quantities—while others confine themselves to what I am convinced are genuine methods?

"The answer is not far to seek. Maize flour is cheaper than wheaten, and, though it may seemingly be a trifling matter to put in 5 per cent., it represents a tremendous sum in the aggregate on a year's trading. I have not taken the trouble to work the figures out, but, assuming that the manufacturer, with an output of a thousand bags, is per-

mitted to add 5 per cent. of maize, which is about 6s. a bag cheaper than wheaten flour, his saving in cost of manufacture would represent a handsome income in the course of the year.

"Another objection to its use is the fact that it is not so nutritious as wheaten flour, and, moreover, it is not calculated to produce the best results in making good pastry. Wheaten flour, with its gluten or fibrine, possesses elasticity, when made into paste. It is not so with maize-flour. Take some arrowroot, for instance, and mix water with it, and see how it works. Now, when you put in your acid-salt and your alkali, and add water, you dissolve the two chemicals, and the result of that action is that you liberate the carbonic acid gas. That rises in little bubbles through the mass of dough, and gives that porosity which distinguishes the leavened from the unleavened bread. If you tried to make it with maize, it would all fall down again owing to the absence of the requisite fibrine qualities. If maize does not help to keep the pores up when once they have been produced, how can it be said that its addition facilitates matters?

"A great point has been made of the suggestion that wheaten flour contains a larger percentage of moisture than maize. Take it for granted that such is the case, will it seriously be contended that the admixture of five per cent. of maize could effectively counteract that moisture? As I have said before, maize is a cheaper flour, and that, in my opinion, is why they want to use it. It gives them a great pull in the present day of cut-throat competition and rush for cheapness. One manufacturer finds another doing a big line with a certain customer, and he says to himself, 'I must cut that man out,' and he proceeds to do it, even if he has to resort to some form of trickery. If once you allow a percentage of maize in self-raising flour, you will find the flour-dealers will be putting it into ordinary flour, and what the consequences of that would be I do not care to conjecture. The whole of the miller's business will be prejudiced, and, in order to compete with rivals under such circumstances, he would have to turn his business from an honest undertaking into a trick concern, in which case the public would be the victims of fraud, according to the percentage of maize, mixed with what should be wheaten flour. The proper course is to sell an honest article, and get an honest price for it, and anything that undermines that principle will have to be guarded against in the interests of the public.

"There is another point which I ought not to overlook, and that relates to the remark made by the grocers' deputation, that the term flour covers the whole region of ground cereals, and that, unless you ask for wheaten flour, you ought not to expect to get that, and nothing else. I call that a very poor support on which to rest a serious contention, because everybody knows that when a woman goes into a shop and asks for flour to make pastry she means wheaten flour.

"I am convinced that to sanction the inclusion of maize flour in small quantities would be equivalent to permitting the thin end of the wedge, and it would be the greatest difficulty in the world to prevent the public being defrauded. Under these circumstances I should oppose the adding of maize flour, and the Birmingham Health Committee will refuse to allow it if they act on my advice."

PRESERVING MEAT.

THE Danish zoologist, Herr August Fjelstrup, who is known for a method of condensing milk without the aid of sugar, has invented a way of preserving butcher's meat, which has been tried successfully at the slaughter-houses of Odense, in Denmark. The animal is first shot or stunned by small slugs from a revolver in such a way as not to injure the brain. When it drops down senseless an assistant cuts over the heart, opening a ventricle and letting the blood run out. A solution of common salt is then injected through the other ventricle of the heart by a powerful syringe into the veins. The process only takes a few minutes, and the meat is ready for cutting up.

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Food and Sanitation.

SATURDAY, MARCH 25TH, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

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THE HOUSE OF COMMONS AND THE FLASH POINT OF PETROLEUM.

THE House of Commons on March 15th, by a majority of 85 members, practically decided to do what the Standard Oil Company require.

During last year 106 persons lost their lives through the use of the murderous refuse 73 deg. petroleum which J. D. Rockefeller and his gang by curious means obtained leave to sell, in the United Kingdom. This refuse was not

allowed to be sold in the United States, so a dumping-ground was found for it in England. The inward story of the conspiracy by which its sale was legalised and the prices paid to the responsible authorities who worked the corruption may one day be revealed, but the methods of J. D. Rockefeller and his associates are not easily brought to the light of day. Upon a few occasions they have been, when they disclosed villainies scarce paralleled in the annals of crime. Arson, conspiracy to murder, bribery of judges and legislators are the everyday practices of the American millionaires whom our Government has now taken under its protection. The United States Congress in 1888 held an investigation into the actions of the Standard Oil Company, and pages 818 to 873 of the Congress report record how the Oil gang bribed an employee of an oil distillery at Buffalo antagonistic to them to cause an explosion. This employee weighted down the safety-valve with heavy iron and packed it with plaster of Paris, and then ordered the fireman to fire up until the fire-box was cherry-red. When this was accomplished he went away from the works, leaving the unsuspecting victims of this infernal work to explosion and roasting alive. Fortunately, the crime was not well enough done, and the safety-valve lifted itself, for, despite weights and plaster, the unusual pressure blew it open, and it did not keep the gases in to explode as had been planned by the American Oil gang. For this villainy some members of the gang were put upon their trial and convicted, but they were powerful enough to bribe the law, and, although the jury on May 18th, 1887, brought in a verdict "guilty, as charged in the indictment," an accommodating judge fined the criminals two hundred and fifty dollars each. He got his reward later in preferment to a supreme judicial position in America. The "New York World" said of the sentence: "It is calculated to make men, of more boldness than morals, blow up factories."

When these gentlemen were not organising such means of making competition impossible, they had persons employed cutting or plugging the oil pipe lines of the honourable men who would not join their combination.

The Oil gang are many of them church elders, but they can vary prayer with arson or dynamite, ruin their thousands, and cause the death by roasting alive of 106 persons yearly in this country, and our Parliament refuses to make the crime impossible.

How comes it, therefore, that Mr. Reckitt's Bill to raise the flashpoint to 100 deg. F., as recommended by the Select Committee of the House of Commons, meets with the deadly hostility of certain members of the Government, and the Government Whips are found actively engaged in defeating this attempt to save the lives and properties of our people? Do Lord Salisbury and his colleagues who on Wednesday decided to defeat Mr. Reckitt's Bill to raise the flashpoint to 100 deg. F. know these facts? Do the 244 members of the House of Commons who voted for the continued use of Rockefeller's 73 deg. F. domestic dynamite know these facts? If they do, why do they vote for the continuance of the roasting alive of English men, women, and children by this murderous refuse American petroleum? The truth should be plainly stated to the constituents of every one of the 244 supporters of the American Oil gang.

PROPOSED AMENDMENTS TO THE NEW ADULTERATION ACT.

MR. KEARLEY, M.P., has handed in some amendments to the Food and Drugs Bill. The first suggestion he makes is that a time limit should be imposed in regard to the repetition of offences under the Bill. Thus, if a second conviction is obtained within a year of the first, the tradesman shall be liable to a fine of not less than five, nor more than fifty pounds, while a third offence, committed within two years of the second, shall be punishable with imprisonment if the justices so decide. As to foreign margarine, butter, and milk which infringes this Act, Mr. Kearley would have the importation prohibited altogether, and presumably, con-

fiscated if found to have been introduced into the United Kingdom. The member for Devonport would like to see the Local Government Board responsible for taking samples where local authorities have been remiss, instead of, as at present proposed, the Board of Agriculture. He also wants to remove the proviso which would make it necessary for this neglect of duty to have some effect upon the agriculture of the United Kingdom before steps could be taken by the Government department.

Sir Charles Cameron, M.P., will, in Committee on the Food and Drugs Bill, propose the appointment of a Standing Committee of Reference on food standards, to consist of the principal officer of the Government Laboratory at Somerset House, and representatives appointed by the following bodies—the Board of Trade, the Board of Agriculture, the Local Government Board, the Society of Public Analysts, the General Medical Council, the Institute of Chemistry, and the Pharmaceutical Society.

Mr. Denis Kilbride, M.P., and Captain Donelan, M.P., have handed in at the table notice of a large number of amendments to the Food and Drugs Adulteration Bill. As the measure at present stands any person importing margarine or margarine cheese, or adulterated or impoverished butter, will be subject to a fine of £20 for the first offence, £50 for the second, and £100 for any subsequent offence. Captain Donelan proposes to amend this by making any offence after the first punishable with imprisonment not exceeding two years, with or without hard labour. He also proposes the advertising in the local papers, at the cost of the offender, of every conviction under the Act.

Mr. Kilbride will propose that ten per cent. of butter fat proposed to be allowed in margarine should be reduced to five per cent., and that the following words be added to clause 8: "or is coloured to imitate or represent any other food products or to deceive the purchaser as to its composition"; the object of this amendment being to prevent the colouring of margarine to represent butter. It will also be proposed to amend the clause which empowers the Board of Agriculture to set up standards of purity by providing that before determining the standards of purity the Board of Agriculture shall consult with analysts, with representatives of the General Medical Council, with the Associated Chambers of Commerce, and with the trustees of the Cork butter market.

THE GROCERS' FEDERATION AND THE NEW FOOD AND DRUGS ACT.

In the opinion of the Grocers' Federation the following amendments to the Government Bill are necessary:

Section 1. The word "importer" in Section 1 shall mean, include, and apply to any owner or other person for the time being possessed of or beneficially interested in any goods at and from the time of the importation thereof until the same are duly delivered out of the charge of the officers of Customs.

Section 2. The Board of Agriculture, if they take samples, should themselves take the proceedings, and thus supplement the work of the local authority, as it would be found in practice that the method suggested of communicating the results to the local authorities and leaving them to proceed would be ineffective, as local authorities would probably resent the interference of the Board of Agriculture, and prosecutions thus carried on would probably fail. Paragraph (a) of sub-section 1 provides that one part of such a sample shall in each case be sent to the Board of Agriculture. If this is to be carried out, it would entail an alteration in the provisions of the principal Act, and would require the division of the sample into four parts instead of three.

Section 3 appears to give the Board of Agriculture power to take proceedings under Section 2 if they find that the local authority has not taken any proceedings, but this applies only to agricultural produce, and it seems desirable that any provisions for enforcing the Act where the local authority had neglected their duty should be general pro-

visions, applying to all articles of food alike, and a power of this kind should certainly be vested in the Local Government Board, and not in the Board of Agriculture, which deals only with agricultural products, and one section only of trade.

Section 4. This section practically gives the Board of Agriculture power to fix standards for milk, butter, and cheese, and from the point of view of the general trader appears to be unsatisfactory, because under these powers the Board could make regulations which would prohibit the use of preservatives, or colouring matter, and this might be of serious import to the trader and the consumer.

Section 7, with its provisions as to a register, appears to limit the enforcement of that section to the officers of the Board of Agriculture. If this clause be carried, the register ought to be open to all inspectors under the Sale of Food and Drugs Act, and they should be responsible for enforcing its provisions.

Section 12. This provision is entirely unnecessary and unsatisfactory. It would still leave the question of whether the notice is distinctly and legibly written or printed a matter of fact to be decided by the Court in each case, and in this connection the word "obscured" is objectionable, because this would render the notice ineffective if the vendor wrapped the article in a piece of paper for the purpose of the customer carrying it away.

Section 17 clearly does not make an invoice a warranty, and apparently there was no intention that it should. The Select Committee unanimously recommended that an invoice should be a warranty, but Clause 17, instead of extending the operation of the old Act, actually limits it.

Section 19 should contain some provision for verification of the signature of the public analyst, whose analysis it is proposed to use for the defence.

AMENDMENTS OMITTED.

1. No fresh provision is made for simplifying the proceedings to be taken against the giver of a false warranty or invoice. If an invoice be made a warranty it should be the duty of the retailer to bring before the Court upon the hearing of the summons the wholesaler upon whose invoice he relies as a defence.

2. The placing of responsibility upon assistants where it is proved that the employer has taken all precautions for complying with the law.

3. As to the suggestion contained in No. 19 of the Select Committee's report for the establishment of a Court of Reference, it is felt that it would be in every way more satisfactory to enlarge the powers of Somerset House, so as to constitute that institution a scientific Court of Appeal rather than set up an entirely new authority.

4. No provision is made for rendering compliance with the Margarine Act a sufficient defence to all proceedings with regard to butter, or alternatively for providing all proceedings with regard to butter shall be taken under the Margarine Act.

5. Provision should be made for penalties for impeding, bribing, or otherwise interfering with an inspector in the course of his duty. The only penalty now existing is for refusal to sell to an inspector, and provision is necessary for such cases where a vendor snatches his goods back from an inspector to prevent division and analysis, or where a milkman pours his milk away to prevent an inspector obtaining a sample.

6. No provision is made for insisting that analysts should give satisfactory proof of proficiency before appointment.

7. Provision should be made that inspectors should also give some proof of proficiency, seeing how technical and difficult some of their work has now become.

It was resolved that the whole of these points should be sent to the affiliated associations, urging them to give them their united support.

It was also resolved that these points should be raised when the Bill reaches the committee stage in the House of Commons.

WATER AT SPIRIT PRICES.

At Henley-in-Arden Petty Sessions, Henry Walter Jones, licensed victualler, of Lapworth, was summoned for selling whiskey adulterated with 19 per cent. of water beyond the 25 degrees under proof permitted by the Act at Lapworth on January 30th.—Defendant pleaded guilty.—Mr. F. G. Bennett, County Council inspector, deposed that he asked for half a pint of whiskey in the bar of the defendant's house. A woman supplied him, and charged him 1s. 2d. He informed her that he had purchased it for the purpose of analysis, and Dr. Bostock Hill certified that it contained the 19 per cent. of water beyond the permissible 25 degrees under proof. It was a very bad sample indeed.—Defendant, in answer to the bench, said he had been at the "Bell" for seven months, and had kept a public-house elsewhere for a short time previously. He added that he must acknowledge that there had been water put into the whiskey. He was utterly ignorant that it had taken place until he received notice from the excise. His wife had sole control of the bar, and the water had been added without his knowledge. He had taken every means to prevent it occurring in the future, and he was very sorry for what had happened.—The Chairman said this was a very bad case. Defendant would have to pay £2 and 10s. 6d. expenses. It was a very old dodge for the defendant to put the blame on his wife.—Defendant repeated he had no knowledge that it was done.—The Chairman: We don't believe that.—Defendant remarked that he had not the money with him.—The Chairman said the bench would not give him time. He had been there twice lately, and he should have brought the money with him. He was very lucky not to have been fined £5.—Defendant said these were very harsh words, and offered to pay by a cheque on a Birmingham bank, but Supt. Lambourne said the bench would not accept this.—After some discussion the bench said they would allow the defendant to pay the money on the following day to P.C. Blackburn. If he did not do so, he would have to go to Warwick for a month.

MARGARINE AS BUTTER.

At Stratford, Matthew Smith, provision dealer, of 27, St. Paul's Road, Barking, was summoned, under the Food and Drugs Acts, for selling butter which, on analysis, proved to be adulterated.—Mr. E. H. Lister, Clerk to the Barking Urban Council, prosecuted, and produced the analyst's certificate, which set forth that the sample in question was adulterated with 45 per cent. of margarine.—Defendant said that, in view of the analysis, he must plead guilty, but he assured the bench that he sold the "butter" just as he bought it.—The Chairman said the Bench had decided to increase the penalties in cases of this sort, and imposed a fine of 40s. and 6s. costs.—Ernest Warrington, of 41, Gosport Road, Walthamstow, and Alfred Savill, of 1, Boundary Road, Walthamstow, were also severally summoned for selling butter adulterated with margarine, and they were each fined 40s. and costs.—The Chairman said that such dealings were a gross fraud on the poor.

ADULTERATED COFFEE.

At Worship Street on March 14th, Frederick Mean, a grocer, of 213, Hoxton Street, and with shops in different parts of London, was summoned by the sanitary authority of St. Leonard, Shoreditch, for selling coffee not of the nature, substance, and quality demanded by the purchaser.—Mr. Robinson, Vestry Clerk of Shoreditch, prosecuted, and the defendant was also represented by a solicitor.—The Sanitary Inspector proved a purchase of the article named at defendant's shop, and that it was served in a coloured wrapper, marked in accordance with the Act that it was "sold as a mixture of chicory and coffee." The analysis showed that the chicory was 55 per cent., and the Vestry Clerk submitted that it was an excessive proportion and intended "fraudulently to increase the bulk," so that the defendant could not benefit by the admission of the label. Further, it was said

that the purchaser had asked for "pure coffee."—Mr. Cluer thought that was the point to be answered, and the defence was a denial that "pure" coffee was asked for. On a request for "sixteenpenny coffee," the adulterated article was always served.—The Magistrate said there was a doubt as to the word "pure" being used, and he could not say, though 55 per cent. of chicory was a large proportion, that it was an adulteration intended "fraudulently to increase the bulk."—The summons was dismissed.

BAD MEAT.

At Barnsley, on March 15th, James Townend and Richard Townend, brothers, butchers, of Hemsworth, were charged with having exposed unsound meat for sale in Hoyland Nether market. Mr. Raley prosecuted and Mr. J. Carrington defended.—Richard Townend, through Mr. Carrington, pleaded guilty.—Mr. Raley said that as James Townend had pleaded guilty there would be no dispute as to the quality of the meat.—Dr. Allott said he was medical officer to the Hoyland Urban Council. On Saturday, February 18th, he went to the Hoyland market and found a stall there in the possession of James Townend. On the stall were several pieces of meat which were unfit for the food of man. He requested Inspector Ploughwright to remove several other pieces of meat, beef and veal, which were under the stall. The meat was in a flabby state, and looked as if it had been soddened in water. The inside of the ribs presented a pinky-buff colour. There were evidences of tuberculosis. Four pieces of the meat were beef, and one was veal. Witness took the meat to Mr. Martin Robinson, veterinary surgeon, who also condemned it.—Mr. Robinson gave corroborative evidence.—Police-constable Baldwin said he was in the market near the stall on two occasions, and saw the meat exposed for sale.—Mr. Carrington, for the defence, submitted that the evidence he would call would prove that James Townend had been unable through illness to attend to the business, which had been conducted by his brother, and he had never seen the meat purchased or sold. He called the two defendants, who bore out the statement.—The magistrates said they considered the case was proved against both defendants. The maximum fine was £20 for each piece of meat exposed for sale, or three months in default. The elder defendant might have some excuse, and he would therefore be fined £5 and costs, or one month. The other defendant was the worse of the two, and would be fined £10 and costs, or two months in default.

ADULTERATED MILK OF SULPHUR.

At the Ossett Borough Court on March 20th summonses were heard against the Ossett Industrial Co-operative Society, Limited; John Giggall, grocer; and J. S. Wilby, grocer, for selling at their respective establishments milk of sulphur which was adulterated with calcium sulphate. In the first case the analyst's certificate stated that there was 21 per cent. of sulphur and 79 per cent. of lime, and in the others the percentages of sulphur were somewhat larger. Evidence was given by Ernest Crabtree, an inspector of the West Riding County Council. The defendants all stated that they had acted in ignorance, and complained that the Sanitary Department of the County Council had not issued warnings to tradesmen who were in the habit of dealing in such drugs that a standard had been recently established. The Bench inflicted in each case a nominal penalty of 1s. and costs.

FLAKE COCOA.

At the Isle of Wight County Petty Sessions Edwin Lowe, a youthful grocer's assistant, of Cowes, defended by Mr. H. C. Damant, was summoned for a breach of the Food and Drugs Act.—Inspector Coleman said that on the 9th ult. he visited the grocer's shop of Mr. Brown, High Street, Cowes, and asked defendant for a half a pound of cocoa, and was charged 3d. for what, according to the certificate of the analyst, contained 34 per cent. of sugar, 26 of sago and

starch, and 40 per cent. of cocoa. Defendant afterwards told him that it was called "flake cocoa," and Mr. Brown came up at the time and said to defendant, "I told you and the other assistants that this was not to be sold as cocoa."—Cross-examined: The best class of cocoa was about 3s. a pound. He had never heard of "flake cocoa" before.—Mr. Damant submitted that there was clearly no intention to defraud the public, who knew perfectly well that they could not get the best cocoa at 6d. per lb.; nineteen out of every twenty householders knew what flake cocoa was, and as the ingredients of the mixture were not injurious to health, and there was an absence of intention to deceive, it was, according to decisions given on this point, one of the excepted cases; at most it was a purely technical offence. There was no such thing as pure cocoa sold; the best of it contained other ingredients to some extent. The proprietor extremely regretted that, contrary to his instructions, the "flake cocoa" had been sold as "cocoa," but it was an unintentional mistake, made with no idea of fraud.—The Chairman said after the able speech of defendant's solicitor the Bench were willing to believe that it was not done for any special profit; but the poor must be protected from being led to imagine that they were buying pure cocoa. Defendant, who was a young man and perhaps not so responsible as those above him, would be fined 5s. and costs, including the analyst's fee of 10s. 6d.

DRUG ADULTERATION PROSECUTIONS.

At Wednesbury, on March 14th, Charlotte Tomlinson, chemist, Market Place, was summoned by Mr. H. Van Tromp, county inspector under the Food and Drugs Act, for selling bicarbonate of soda for powdered borax. Evidence was given that an assistant inspector visited defendant's shop and asked to be supplied with 2 oz. of powdered borax. The manager handed him a small package, and on analysis the contents proved to be soda. Defendant was fined £3 and costs.—George Ford, herbalist, Trowse Lane, was summoned for selling camphorated oil which was 45 per cent. deficient of camphor. In reply to the Stipendiary, the analyst (Mr. E. W. T. Jones) stated that exposure would occasion some evaporation, but not to the extent which existed in this case. A fine of 20s. and costs was imposed.

ADULTERATED EUCALYPTUS OIL.

At the West Riding Petty Sessions, Mr. F. Craven, chemist, Pontefract, was charged with having sold adulterated eucalyptus oil.—The defendant stated as to the oil that he did not know there was a difference of requirement between the recent pharmacopœia and the new one, which came into operation on January 1st, 1898. The oil was a thing he was not asked for once in twelve months. Had he known of the change he would have got some fresh. It was in accordance with the recent pharmacopœia. He had no idea it was not right. This occasion made three or four times they (the inspectors) had called for samples, and this was the first time they had found anything wrong. The things in general request were right.—The Mayor said that unfortunately these things were under the requirements of the Act, perhaps slightly so. As this was defendant's first appearance the Bench did not wish to be hard with him. He must pay the costs (17s. 3d.).—The costs of the inspector and his assistant were disallowed. The principal item of cost was the 10s. for analysis.

WHAT IS VINEGAR?

CURIOUS EVIDENCE OF PROFESSOR TICHBOURNE.

At Limerick recently, Sergeant Kennedy, Inspector under the Food and Drugs Act, prosecuted Mr. James Alexander (Alexander and Co.), grocer, George Street, for having sold table vinegar which was not of the nature and quality of the article asked for. Sergeant Kennedy stated he purchased the vinegar as table vinegar, and forwarded a sample to Sir Charles Cameron, who certified that the sample was not a proper vinegar, but was merely acetic acid; it

contains neither alcohol nor phosphoric acid, both of which are in the vinegar prepared from malt wine and other fermented articles; even if distilled from malt or wine vinegar, it would still contain alcohol. Mr. Beauchamp said he intended meeting the case on its merits; Mr. Alexander had sold the article as he got it from the manufacturer, and he had the manufacturer and Professor Tichbourne in court to show the genuine quality of the article. Sergeant Kennedy, in cross-examination by Mr. Beauchamp, said he himself took the vinegar out of a bottle in the shop labelled "Pure Table Vinegar—Guaranteed Genuine." Mr. Beauchamp—When you wrote to Sir Charles Cameron did you say anything particular? Sergeant Kennedy—I merely wrote saying that I was sending a sample of vinegar. Mr. Beauchamp—From reading the certificate do you know whether he analysed that sample for malt liquor? Sergeant Kennedy—I do not. Mr. Beauchamp said he had brought Professor Tichbourne, who would tell them what malt vinegar is, and what pure table vinegar is. Mr. Hickson—Is your defence between table and malt—that table vinegar is not malt vinegar? Mr. Beauchamp—Yes, we say we sold pure table vinegar. Mr. Hall—As you bought it? Mr. Beauchamp—Yes. I have brought the manufacturer, Mr. Downes, of Dublin, to prove that it is pure vinegar made from the best cane sugar. Mr. Alexander, in reply to Mr. Beauchamp, said they had been selling large quantities of the article and never heard any complaint. Malt vinegar was a much more expensive article. The bottle was labelled as what was known in the trade as table vinegar. Sergeant Kennedy—Did you sell it in the same state as that in which you bought it? Mr. Alexander—Yes. Mr. Hickson—Do you deal largely with this firm? Mr. Alexander—Yes. Mr. Hickson—Do you get a warranty? Mr. Alexander—No. Mr. Beauchamp—We got a written warranty on the invoice that it was pure vinegar. Mr. Hickson—That means a warranty. You have a good defence on that point. Mr. Beauchamp—Our defence is two-fold: one is that he sold it as he got it, and the other is that we have the manufacturer here, who has been fifteen years in Dublin, and the article has gone through various analyses without a complaint. The Sergeant acted rightly, but the manufacturer, for his own sake, wishes to show the Bench that the article has been manufactured on what is known as the Pasteurizing system. Mr. Hickson—So far as my opinion goes, the warranty gives Mr. Alexander a clear bill. You are now putting up the manufacturer, and the question for the magistrates is, what position the police will take as regards the manufacturer. Mr. Beauchamp—Well, I would like to examine him and also Professor Tichbourne. Professor Tichbourne, in reply to Mr. Beauchamp, said from the sample produced he had no moral doubt that it was pure table vinegar. What is it manufactured from?—I am of opinion that this has been made by fermentation from sugar; it is pure vinegar free of adulterants or deleterious substances; I am also of opinion it is not a mixture of acetic acid and water. Detailed technical evidence was given by Professor Tichbourne as regards various processes of manufacture. Mr. Hickson, referring to the analysed sample, asked whether it was the ordinary vinegar of commerce. Professor Tichbourne—Yes, it is largely becoming so. Mr. Hickson—In the case of an ordinary person going into a shop and asking for vinegar, is that a fair thing to give him? Professor Tichbourne—Yes. Mr. Hickson—Is that an article of commerce as vinegar? Professor Tichbourne—That would be my definition of it. The bench decided on dismissing the case.

MORE DISGUSTING TINNED FOOD REVELATIONS.

At Thames Police-court, on March 16th, Joseph Fells and Vernon Fells, of Sage Street, Shadwell, appeared before Mr. Dickinson to answer adjourned summonses charging them with being in possession of a quantity of tinned food which was unfit for the food of man.

Mr. Young prosecuted, and Mr. Hawtin, barrister, defended.

The prosecution was instituted at the instance of the Limehouse District Board of Works, and altogether 3,917 tins of condensed milk, lobster, salmon, pineapple, and peaches were seized. On February 2nd Dr. Thomas, the medical officer of health, in consequence of a communication made by the Clerkenwell Vestry, visited the defendants' premises in Sage Street and examined a number of tins, which were found to be bad. The whole stock was seized, and brought to the court, when Mr. J. Fells made no objection to their being destroyed. One box, containing 72 tins of Honey brand condensed milk had no less than 59 blown tins. Fresh labels had been put on the tins, and there was a quantity of loose labels about. Out of 39 tins of "Finest Columbia Salmon" 10 were bad, and out of 336 tins of condensed milk, in seven boxes, no less than 231 were bad. There were also 501 tins of bad sardines, and about 72 tins of pineapples, all in a similar state. In a shed were 11 boxes containing 792 tins of condensed milk, all of which were bad. In addition were other tins, which the defendant said were intended for pigs' food. Dr. Thomas, in cross-examination, said the generation of gas caused tins to bulge. Milk would not decompose until air first got to it.

For the defence, Mr. Hawtin said he hoped to be able to prove that the goods seized were not intended for human food. Mr. Joseph Fells wished to take all responsibility, and if any blame existed his son had nothing to do with it. The place was used as a storehouse for sorting the good from the bad. Mr. Fells's system was that adopted by larger firms, and he was always willing to exchange good tins for bad ones. A Mr. Parsons was paid to cart away the goods which were bad and when the quantity had sufficiently accumulated. The good tins were prepared for the market, but they were not doctored in any way. He should prove that it was impossible to resolder, for the tins would continue to bulge, and that was a sign that they were bad. He hoped it would not be long before all tins were marked, showing when the contents were tinned.

Mr. Dickinson: I hope it will be more efficacious than marking eggs as being "new laid" when they are six months old.

Mr. Hawtin, continuing, said as Mr. Fells had elected to be tried at the sessions in connection with another case, he asked that the present case might be adjourned. Mr. Fells had been in business for thirty-seven years, during which time only one previous case of a similar nature had been brought against him.

Mr. J. Fells went into the box, and said it was not always possible to tell when tins of milk were good or bad. Lobster turned black quickly, and was the most expensive thing that was now tinned. It was not true that he had pricked tins to allow the gas to escape. On the tins produced were only original prickings. Lobster and fruit tins were pricked more than once by the manufacturers. He had no soldering irons on his premises. It was the custom to relacquer tins, as they were five months coming from the Pacific shores. He was keeping the milk to sell to pig feeders at Waltham Cross, and other bad tins of meat and fruit were destroyed. He had never intentionally sold any food that was bad.—By Mr. Young: He was the sole member of the firm, but did not carry on the business in the name of his son for the purpose of defrauding his creditors. He examined tins generally. He obtained milk from Messrs. Leman and Herbert Saunders, 96, Leadenhall Street. He paid the latter 6s. a case. Saunders's tins were unlabelled, and he paid Leman 2s. 6d. a case. When he bought the tins he was told they were not sold for human food. Between October 3rd and November 28th he might have purchased 325 cases, containing either 48 or 72 tins from Mr. Leman. He might have purchased some at 6d. a case and some at 4d. a case, but he could not say how many he found good.

Mr. Dickinson adjourned the case.

At Lambeth, on March 16th, before Mr. Hopkins, Frederick Gordon Hartridge and Granville Hartridge, trading as Hartridge Bros., at Penarth Street, Old Kent Road, appeared before Mr. Hopkins to answer an adjourned summons taken out by Inspector Homer, on behalf of the Cam-

berwell Vestry, complaining that on February 20th last they had deposited on their premises, for the purpose of preparation for sale, a quantity of meat, to wit, certain putrid sheep's hearts, 56 large tins of potted meat, eight hams, and a tray containing pieces of putrid meat and poultry bones, which was unwholesome and unfit for the food of man. There was a second summons against the defendants for having on February 20th deposited at their premises, for the purpose of sale, about 5,000 small tins of potted meat which were unwholesome and unfit for food. Similar summonses had been issued against each of the defendants individually.

The case rose out of a visit which Inspector Homer paid to the premises of the defendants, who were stated to be manufacturers of tinned meats. Evidence in support of the summonses was given last week by Dr. Francis Stevens, medical officer of health for Camberwell, and Messrs. Homer and Chadderton, two sanitary inspectors in the service of the Camberwell Vestry. The case had been adjourned at the request of the defendants to enable them to call witnesses to disprove the allegations made by the vestry.

Mr. Edmondson now addressed the Court for the defendants, and said his defence was that the whole of the stuff that was seized was substantially sound. He asked the Court not to condemn the defendants upon the very cursory examination made by the vestry's inspector and the doctor. The defendants had supplied large export firms, and had never had a single complaint made against them.

Dr. G. D. Knight, of Brixton-road, was called for the defence, and stated that on the 7th March, in company with Dr. Scott, he examined a tin of potted ham and tongue sealed with the seals of the Camberwell Vestry. Dr. Scott and himself came to the conclusion without the slightest doubt that the meat was absolutely sound. They also examined a large piece of corned beef, and found that it was absolutely sound and fit for food.

Dr. G. B. Scott gave corroborative evidence.

Mr. William Haydon, a butcher, and a member of the London County Council, said a tin of potted meat bearing the seal of the Camberwell Vestry, was brought to him. He examined it, and found it to be perfectly sound and good. He also examined a sample of corned beef, and found it wholesome and good.

Mr. J. H. Milligan, a cheesemonger, said the defendant bought eight American hams from him on February 17th. The hams were then perfect. They had been left over from the Christmas trade. He had seen hams two, three, and four years old. The defendants had shown him a tin of corned beef. It was sound.

Cross-examined: He charged threepence per pound for the hams.

Mr. Frank Knowles, a meat and meat product expert, and Mr. F. M. Smith, a colonial meat importer, also gave evidence to the effect that they had examined tins of potted meat and samples of corned beef submitted to them, and found them good and wholesome.

Mr. Frederick G. Hartridge, one of the defendants, was also examined, and gave evidence at some length, traversing the statements made by the vestry's inspector. He said his brother and himself had carried on the business for a year and nine months. Amongst other things, the witness stated that what had been described as a tray of putrid meat and bones simply contained boiled rice-flour.

In cross-examination by Mr. Marsham, the witness said he was certain no chicken bones were found on the premises.

Mr. Marsham: But you make potted chicken?

The Witness: Yes; but we don't make it out of chicken, sir. (Laughter.)

Questioned by the magistrate, the witness said they had about 40,000 tins of potted meat on the premises. Their output averaged from 20 to 25 gross of tins per week. They were manufactured for export, and the price ranged from 16s. 6d. to £1 per gross. The potted meats were made of corned beef, boiled bacon, boiled rice-flour, margarine, and sundry spices. The chicken, ham, and tongue were flavourings.

Mr. Granville Hartridge, the other defendant, was also examined, and explained that the trade which the firm carried on in sheep's hearts was distinct from the manufacture of the tinned meats. He said the firm had never received a single complaint as to the quality of their prepared meats.

Mr. Hopkins, at the close of a long hearing, said he was sorry he was not able to do anything to get the defendants out of the serious position in which they had placed themselves. The impression which the case left upon his mind was that the defendants were fairly caught making up all sorts of putrid meat into every sort of potted filth. If the Act were strictly applied the defendants had made themselves liable to penalties amounting to thousands of pounds. It was a case, however, in which he felt himself absolutely unable to fine, and each of the defendants would have to go to prison with hard labour for four months.

Mr. Marsham asked his worship to allow the vestry costs as against the defendants.

Mr. Hopkins said he would allow £10 10s.

Mr. Edmondson gave notice of appeal. The necessary sureties for the prosecution of the appeal at the sessions having been tendered and accepted, the defendants were released.

ARSENIC WORKERS IN CORNWALL.

SINCE the decline of tin and copper mining in Devon and Cornwall, the manufacture of arsenic has been largely developed, and within the past few years a number of arsenic works have sprung up on the site of abandoned mines. *The Daily Chronicle* says that in the train of this industrial change has come an abnormal increase of pauperism in the districts where works are in operation, caused by the hands becoming disabled at an early age from poisoning through inhaling arsenical fumes, and coming, with their families, upon the rates.

Alarmed at the rapid growth of this new burden upon the ratepayers, the Tavistock Board of Guardians instructed two of their medical officers to investigate the causes of pauperism among arsenic workers, and also the condition of their employment. In their report, which was presented to the board yesterday, the medical officers, Drs. Brodrich and Bowhay, stated that they confined their inquiries to the parish of Calstock. They found there a considerable number of former arsenic workers in receipt of relief. Nearly all were suffering from diseases of the respiratory organs. The average age at which they were disabled from following their employment was forty years, while a few at thirty-two were already practically wrecks. Nearly all were suffering from diseases of the respiratory organs, the effects of arsenical fumes, and all were heads of families. They found also that of every 100 employees at the arsenic works who had died or become disabled in the parish during the last three years, eighty-three had been due to respiratory diseases.

Visiting the arsenic works in the neighbourhood, the doctors found that furnacemen wore no protection, and that the men employed at the mill and other departments were protected only by a covering of lint over the nostrils, tied by a handkerchief, extending over the mouth as well. This protection they considered most unsuitable. For better protection they suggested that all arsenic workers should be required to wear a mask made of wire, fitting closely to the face, and covered with gauze.

In the course of the discussion, it was stated that the report only touched the fringe of the evil caused by arsenical poisoning, since the investigation had been confined to those in receipt of parochial relief, and there were many other arsenic workers disabled from following any employment who had not yet come upon the rates. Some of the guardians urged that the Government should be asked to legislate for the protection of the arsenic workers. Eventually the Board decided to send copies of the report to the Local Government Board and the managers of all the arsenic mines in the district, with the request that the medical officers' suggestion should be acted upon.

ROQUEFORT CHEESE.

ROQUEFORT cheese, the delight of modern epicures, is made of a mixture of goat and sheep milk. The reputation of this cheese extended back into dim antiquity, and Pliny mentioned it in his writings.

It is made chiefly from the milk of Larzad goats and sheep, and in the records in France it is stated that in the year 1866 250,000 sheep and goats out of a flock of 400,000 gave enough milk for the making of 7,150,000 pounds of cheese.

In the manufacture of Roquefort cheese the sheep and goats are milked in the evening, after their return from the pastures, and after they have been allowed to rest for an hour or so.

The evening's milk is heated almost to the boiling point and then is set aside. In the morning it is skimmed, heated to 98 deg., and mixed with the morning's milk for coagulations. The curd is well kneaded with the hands and pressed in layers into moulds with perforated bottoms. A thin layer of mouldy bread is put between each layer of curd.

The object of that is to hasten the "ripening" of the cheese by supplying the germs of the green mould peculiar to cheese. The bread used for this purpose is made, before the preceding Christmas, of about equal parts of summer and winter barley, with plenty of sour dough, and some vinegar.

When mouldy enough it is ground and sifted, moistened with water, and kept from the air until used in making the cheese.

The curd remains for three or four days. Then they are taken to the market in Roquefort, where they are sold to the different makers of Roquefort cheese.

These manufacturers continue the ripening of cheese by placing them in the very damp caves which abound in the precipitous walls of the limestone hills which almost completely surround the village.

The cheeses are left in the caves sometimes more than a month, during which time salt and brine are rubbed into them, and they are pricked frequently with long needles to let the salt penetrate into them and also to accelerate the process of moulding.

SCOTTISH CHAMBER OF AGRICULTURE AND THE NEW ADULTERATION ACT.

THE Chamber has suggested the following amendments: Section 8. Add to this clause, or insert in a separate clause: "It shall be unlawful to sell, either entire or mixed with other oatmeal, oatmeal made abroad, or made in whole or in part from foreign oats, without informing the buyer by declaration on the sack, packet, parcel, invoice, or otherwise, that the oatmeal is made in whole or in part, as the case may be, from foreign oats, and every person who fails to inform the buyer in accordance with this enactment shall be liable to a fine not exceeding £10." Section 11. At the end of this section, or in a separate clause, add: "It shall be unlawful to sell, expose for sale, or import any margarine artificially coloured so as to imitate butter, and every person who infringes this enactment shall be liable, on summary conviction, to pay a fine not exceeding £10." It is suggested that Members of Parliament and district agricultural societies should exert themselves in favour of the passing of the bill, which the committee consider one of outstanding importance, not only to the agricultural interests, but also to the interests of the general public. With reference to the Workmen's Compensation Act Amendment Bill, 1899, the committee state that this bill proposes to extend the operation of the workmen's compensation to farm servants. The committee recommend the directors to petition against the bill. They consider that the bill is not required, at all events in Scotland, where the conditions of employment of farm servants are materially different from those applicable to farm servants in England and also to other classes of servants. The Improvement of Land Bill, 1899, proposes to extend the period for repayment of

improvement rent charges authorised after the Act passes to such period, not exceeding forty years, as the Board of Agriculture shall determine. The committee recommend that this bill be supported, but they suggest that its leading provision should be made to apply to all current rent charges. They consider that this can be safely done, seeing that the Board of Agriculture must have regard to the character and probable duration of the improvement in deciding on the period of repayment.

FLOUR ADULTERATION DODGES.

THE "Millers' Gazette" says the following circular has been distributed in England by the Glucose Sugar Refining Co., of Chicago:—"Gentlemen,—Indirectly, we learn that the flour dealers of Europe are mixing and blending flour, using corn flour and other products in large quantities. If such be the case, we beg to call your attention to our flourine, an improved corn flour, which can be used to good advantage, as it will cheapen the flour materially, and in no way affects its colour. As you are undoubtedly aware, regular corn flour is likely to become rancid in a very short time, owing to the fact that the oily part of the corn has not been removed. In flourine the germ, which contains the oil, is removed, and our product is perfectly white, and will remain fresh and sweet indefinitely. Our flourine is shipped in bags weighing 140lb. net, and we usually ship 300 bags to the carload. If you are interested in anything of this kind, we will be pleased to hear from you, and will send you a small sample for your inspection, and quote you price." This circular has evidently gone astray. There is no room and no demand for "Flourine" in this country, and the manufacturers will have to keep it for home consumption.

OYSTER BEDS AND DISEASE.

THE Special Committee ordered to inquire into the alleged danger of disease arising from oysters eaten from the beds at Southend have just issued their report, and it has had the effect of the authorities peremptorily ordering the beds to be closed. The Committee are of opinion that the disease arose from the oyster-beds, but action has been threatened by the owners of the beds against the authorities. They deny that the beds were the cause of any disease, and demand the reopening of their beds and substantial damages for the loss they have already sustained. An investigation of the oyster-beds in the vicinity of West Brighton would seem to be necessary. The stench recently at Shoreham has been abominable, and it is said many of the oysters sold at Brighton are laid at Shoreham.

TUBERCULOSED MEAT AND MILK.

MR. CHANNING, M.P., has given notice of his intention to initiate a discussion on the report of the Royal Committee on tuberculosis. Every dairy farmer is interested in this question, and holds views of his own upon it. The hon. member divides the subject into three parts. First, he urges that the danger to the public health of infection from tuberculous meat and from the milk of tuberculous cows demands measures for effectually preventing the sale of such infected meat and milk and for determining the conditions of compensation in case of slaughter. In the second place, provision must be made for a uniform inspection of meat and of cows by competent veterinary surgeons; and, thirdly, the Treasury must provide money for the voluntary testing of cattle with guaranteed tuberculin and by qualified veterinary surgeons, with a view to the elimination of the disease from the herds and dairies of the United Kingdom.

At a meeting of the Liverpool Corporation on March 9th, Mr. Shelmerdine referred to the large number of deaths due to influenza, and moved that the medical officer report (1) as to the desirability of advising persons keeping cows within the city for dairy purposes to purchase, for the purpose of adding to their stock, only such cows that had been subjected to the tuberculosis test and found free from

tuberculosis, and as to what arrangements were necessary to enable this test to be applied by the officers of the Corporation free of charge to the cowkeepers; (2) to grant a certificate to such local cowkeepers as might be willing from time to time to submit the whole of their stock to the tuberculosis test, either by officers of the Corporation or by their own veterinary surgeon; (3) and as to the desirability of giving greater prominence to convictions for offences under the Food and Drugs Act, more especially in connection with milk, and to giving prominence to the locality of shippings either within or without the city from which tuberculous milk had been forwarded for human consumption.

Mr. Turner remarked that they could not expect the cowkeepers to assent to such conditions without consideration.

The Chairman.—I do not agree with the granting of certificates.

Dr. Hope said the suggestions made no doubt appeared a little formidable, but a great deal of work had already been done upon those lines. The cowkeepers asked the Corporation from time to time to examine their stock, and he did not think the cowkeepers would be opposed to the suggestions.

Mr. Roberts said that some milk dealers had posted outside their premises that they sold non-tuberculous milk, and their business had increased tenfold.

Mr. Taggart hoped the medical officer would take samples of this tuberculous milk.

Mr. Shelmerdine's propositions were agreed to.

THE SALE OF CONDENSED SEPARATED MILK.

THE President of the Board of Agriculture, Mr. W. H. Long, M.P., received a deputation on March 20th at the offices of the Board in St. James's Square, on the subject of the Food and Drugs Bill. The deputation consisted of representatives of various local authorities in the metropolis and in the provinces, and their principal object was to ask for the insertion of a clause in the Food and Drugs Bill promoted by the Government, by which it would be imperative for manufacturers to label tins of condensed, skimmed, or separated milk, so as to indicate that it was unfit for the food of children and invalids. Mr. Long was accompanied by Lord Cross (Lord Privy Seal), Mr. T. W. Russell, M.P. (Parliamentary Secretary to the Local Government Board), Mr. T. H. Elliott (Secretary to the Board of Agriculture), and Sir Jacob Wilson (Agricultural Adviser of the Board of Agriculture).

Mr. Ratcliffe Cousins, chairman of the Camberwell Vestry, introduced the deputation (which consisted of some 70 gentlemen), and said they wished to bring before the notice of the Government the advisability of inserting in the proposed Bill words which would show that condensed separated milk was not fit food for infants and invalids. (Cheers.)

Dr. Smith, chairman of the Public Health Committee of the Camberwell Vestry, said that children brought up on condensed milk invariably suffered from rickets. (Hear, hear.) He wanted Clause 11 of the Government Bill made infinitely more drastic.

Dr. W. Stocker (Willesden) said that practically 40 per cent. of the children who died in his district last summer, under one year of age, died from the effects of taking condensed milk.

Mr. Cassall, the public analyst of Kensington, said that in some cases condensed milk contained less than .2 per cent. of milk.

Mr. J. Robertson, of Sheffield, said that in his district tins of separated milk were very largely used for children, and under conditions which were not conducive to the good health of the children. The use of condensed milk for baking and other purposes was distinctly good, but as food for children it was most dangerous, and something ought to be done to stop the sale of it for this purpose. (Cheers.)

Mr. Long, in reply, said there were differences of opinion as to the nutritive properties of the separated or skimmed milk. He had evidence of men of high scien-

tific attainments that this kind of milk had nutritive properties, and, for certain purposes, was not only harmless but decidedly beneficial. He gathered that the deputation confined their opposition solely to the use of this stuff for infants and invalids; and they did not suggest that adults should not consume it, or that it would be injurious to them. (Hear, hear.) In fact, there was a consensus of opinion that in the case of adults it was a useful and valuable article of food. (Hear, hear.) Then they suggested that there were two methods by which the consumption of the article might be regulated. One was by ensuring by enactment that the public when they bought it should know what it was they were buying. (Hear, hear.) That was the safest line for the public and the Government. The other suggestion was that in some way or other the information should be conveyed to the purchasing public that the article not only was what it was, but that it had or had not certain properties which rendered it an undesirable article of food for a certain portion of the community. In asking the Government to undertake that task they were laying upon them a heavier burden than they, apparently, could realise. It was rather a difficult thing for a Government to undertake to protect the public against themselves. They were asking the Government to put shackles upon the public which would prevent their purchasing an article which they might choose to purchase, and which they were entitled to purchase, if they knew what it was and bought it under its proper name. The Bill would be considered after Easter by a Grand Committee, and, of course, any practical suggestions would be considered by the Government. He would like to say a word on the avoidance of the law in regard to the description of articles. They had pointed out that much of the condensed, separated, or skimmed milk was sold under labels which brought into bold relief the word "condensed" and the word "milk," but which did not bring out quite as conspicuously the word "separated" or "skimmed." That looked as if the public knew, to some extent at all events, what the meaning of "separated" or "skimmed" was. But in other matters they knew that there was, unfortunately, an attempt to avoid the law by so making these labels as to conceal the real identity of the article. One of the objects of the Bill was to put an end to that in the future. It would lighten the restrictions which Parliament had already thought fit to impose upon the sale of certain of these articles, and by taking powers enable the Board of Agriculture to assist local authorities in the discharge of their onerous, and sometimes unpopular, duties. The law would be made perfectly clear as to what vendors must do in selling these articles; and the law would be administered uniformly throughout the country, and so put an end to fraudulent and dishonest trading.

The deputation then withdrew.

ADULTERATION IN ISLINGTON.

DR. HARRIS, Medical Officer of Health, reports that—Two hundred and twenty samples of food were bought or produced under the Sale of Food and Drugs Acts for analysis, in addition to which 17 were obtained under the Margarine Act. Of the former only 18 or 8.2 per cent. were adulterated, and of the latter, 7 or 42 per cent. were sold in contravention to the Act; that is to say, either the bulk was not properly labelled, or the margarine was sold in papers which had not the name of that article printed on them.

Milk.—One hundred and thirty samples were submitted for analysis, 10 of which were adulterated. Of these milks 48 were bought on Sundays, 52 on week-days, and 30 were procured in course of transit at the Great Northern Railway at Finsbury Park.

Dr. Frank L. Teed reported that during the quarter he analysed 231 samples of foods and drugs, purchased under one or other of the Acts regulating their sale. Of these 231 samples, 26 were sold contrary to some provision of one or other of the three Acts. This gives 11.3 per cent. of adulterated samples. Of the total samples,

227 were submitted to me by inspectors, 4 samples by a private purchaser. The 4 privately purchased articles were all bought as butter, but three of them were adulterated with margarine. A feature of the quarter had been the comparatively large percentage of offences in the sale of drugs. One sample of lime-water was found wrong out of four purchased; 3 samples of sweet spirits of nitre were defective out of 6 purchased; and out of 5 samples of oil of eucalyptus, 4 were found to consist of a substance quite innocent of any trace of the oil of eucalyptus of the British Pharmacopœia. It has sometimes been maintained by people who ought to know better that drugs are never adulterated. In the face of the above figures such a contention can no longer be urged seriously.

FOOD PRESERVATIVES.

IN the House of Commons on March 20th, Mr. Kilbride asked the President of the Board of Agriculture whether he was aware that foreign bacon imported into this country had been found to contain 0.33 per cent. of boric acid, and that the French Authorities had refused to admit the importation of bacon thus preserved on the ground that it was injurious to health; whether he was aware that the law in Brazil prohibited the use of borax as a food preservative; and whether, in view of the action taken by other Governments, inquiry would be made into the use of borax in the interest of the public health.

Mr. Chaplin (who replied) said: I am not aware of the facts suggested in the question, and have not yet been able to ascertain how far they are correct. The Local Government Board has no information on the point. I have been considering whether such an inquiry should be made, and if it appears desirable in the interests of the public it will be made.

ADULTERATION IN THE COUNTY OF ANTRIM.

PROFESSOR JOHN F. HODGES, M.D., F.I.C., and Mr. J. F. W. Hodges, F.I.C., report that since Summer Assizes, 1898, 205 articles of food, etc., have been submitted to them for analysis. Of these were 12 specimens of waters forwarded by the Boards of Guardians of the Antrim, Ballymena, and Larne Poor Law Unions. Forty-seven samples of food, etc., were received from Sergeant McGivney, Cushendall; 33 from Sergeant Phillips, Larne District; 35 from Sergeant Hooks, Antrim; 38 from Sergeant Lister, Lisburn; 14 from Sergeant Dunlop, Whiteabbey; 10 from Sergeant Baird, Ballymena; and 16 from Sergeant Love, Ballymoney. Since March, 1898, 262 articles have been examined from the county, and the following articles reported by us as adulterated, viz.: 3 samples of whisky, 2 of rum, 6 of buttermilk, and 1 of sweet milk.

The articles analysed consisted of: Whisky 37 samples, cocoa 5, corn flour 4, buttermilk 14, sweet milk 14, mustard 11, pepper 12, tapioca 3, waters 12, rum 20, butter 7, sugar 5, cream of tartar 7, vinegar 2, gin 2, port wine 5, lard 3, snuff 2, rice 1, citrate of magnesia 2, ginger 6, coffee 5, sherry 2, brandy 2, ginger wine 2, tea 6, allspice 1, sulphur 3, baking soda 4, head salts 1, linseed meal 1, dripping 1, saltpetre 1, cheese 1, sweets 1.

NATIONAL COOKERY.

THE increased attention which is being given to the art of cookery and science of alimentation is evidenced by the fact that the leading chefs, including those of the households of Her Majesty the Queen and H.R.H. the Prince of Wales, are to be found in the Governing Body of the Universal Cookery and Food Association which has just held its eleventh exhibition at the Imperial Institute. One of the benefits of such an association is that it assists the public to select the best article in each department by the awards which it confers. For instance, to Messrs. Van Houten it has given the highest award (the *prix d'honneur*) for both their cocoa and chocolate, thus certifying that the high standard of excellence for which their cocoa has for so many years been distinguished has also been attained by their newer preparation, Van Houten's eating chocolate.

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Food and Sanitation.

SATURDAY, APRIL 1ST, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

All communications for the Editor of "Food and Sanitation" must be addressed to

4, AVE MARIA LANE,
LONDON, E.C.

COCOA ADULTERATION.

WHEREVER an opportunity offers for plundering the public the quack is always found embracing it.

The Select Committee of the House of Commons recommended that a court of reference should be appointed, one of whose duties would be to warn traders and the public against fresh forms of fraud, and recent gross adulterations of valuable articles of food have aroused so strong a feeling amongst medical men that a large number have

petitioned Mr. Chaplin to hasten legislation to suppress the adulteration of cocoa with drugs like kola. Kola is a fraudulent and dangerous adulteration.

Our contemporary, "Pharmaceutical Products," said, "Kola has been taken up by people who would never enslave themselves to rum or opium, because it is announced as a stimulant without reaction. That is sheerest nonsense. There must be reaction from the exhilaration of any stimulant. The first effect of kola is hardly noticeable; the man who takes it simply feels refreshed, but after eight or ten hours the heart's action is increased enormously; then later, in the habitual kola drinker or eater there are the lassitude, the nervous weakness, and the tremulousness that ensue from over-drinking; the difference is that with kola the reaction comes on more gradually. It is in the insidiousness of the drug that the danger lies. The important point for the public to bear in mind is that kola is not harmless, but must be used with the same caution as opium or morphine."

The objection of the medical profession to kola being indiscriminately sold in an article of food has therefore a grave importance, and the ignorant laudation of such articles as kola, malt, or hops discloses a quackery more mischievous even than that of the Harness Electropathic Belts, whose dupes numbered thousands.

Any person giving cocoa containing kola to children incurs a grave responsibility, as the use of such an article is medically declared to be reprehensible and an easy step to drunkenness. Why are public health and morals so menaced? Because of quackery and the desire for gain, because if the public can be gulled into paying the price of pure cocoa for kola nut costing 3½d. per lb., or for other adulterations like malt or hops, the quacks hope to reap a rich harvest before legislation can suppress such adulterations of a valuable article of food. Pure cocoa unadulterated with starch, kola, malt, or hops is one of the very best and perfect foods obtainable, being rich in all that makes bone, flesh, and muscle.

AGRICULTURISTS AND THE NEW ADULTERATION ACT.

THE Devon and Cornwall Chamber of Agriculture have discussed Mr. W. Long's bill for the amendment of the law relating to the adulteration of food and drugs. The President (Mr. W. Hawk) said no apology was needed for introducing the subject before a gathering of agriculturists. As long ago as 1892 a deputation waited on the Government to press on them the importance of dealing with the matter of adulteration, and in 1896 a Select Committee was appointed by the House of Commons to consider the subject. Mr. Long's bill was, he believed, a useful one, not only in the interests of agriculture, but likewise in the community. The preliminary clause was directed against the importation, without conspicuous marks, of margarine, margarine cheese, and adulterated or impoverished butter or milk. Incidentally, he mentioned the fact that the question of the manufacture of cheese was one of increasing importance to them, inasmuch as it had been found that very good butter could be produced in the county of Cornwall. The amount of milk required to make a pound of butter would make 2½ pounds of cheese, which was worth sixpence per pound. No allusion was made in the bill to the question of colouring, and in his judgment the bill fell short on that important point, because he believed fraud would still be perpetrated if that was not attended to. The danger was fully recognised by the Select Committee appointed in 1896, and the Central Chamber of Agriculture had also made representations on the matter. Legislation within recent years had shown that in these matters the necessity of interfering by Act of Parliament in favour of the consumer was being more and more recognised. If adulterated food-stuffs were to be imported at all, let them be clearly stamped as such, and then the purchaser might please himself as to whether he would buy it or not. Passing on to discuss the question of penalties under the bill, the Chairman pointed out that though the maximum fines were named, no minimum amount was mentioned, and those who knew anything of petty sessional work

PURE, WHOLESOME, DELICIOUS.

BIRD'S CUSTARD POWDER

The unfailing resource of every Lady of the House and
successful Housekeeper.

NO EGGS! NO TROUBLE! NO RISK

would know how difficult it was to administer justice in such matters where no minimum was fixed. Dealing with the sub-section which permitted the addition to butter and milk of colouring "which does not render butter or milk injurious to health," Mr. Hawk contended that they had no right to colour home butter if the colouring of imported product was to be prohibited. He hoped to see colouring altogether illegal. With regard to preservatives, it was no secret that these were liberally introduced into milk. It was declared by some that it was absolutely essential; but the question was, should it be stated that it had been used? If the people in the towns knew the important bearings which this practice had on health they would be up in arms. Many preservatives used were extremely injurious to health, more especially to infants. Chemicals were introduced which experts declared were very dangerous if taken regularly in small quantities. In his opinion, where preservatives were used the fact should be made plain in all cases. Focussing his remarks, he presented the following suggestions:

Whilst heartily approving of the principle of the "Sale of Food and Drugs Bill," introduced by the President of the Board of Agriculture, this Chamber is of opinion that the following clauses need amendment: To clause 1, sec. 1, sub-sec. (a) (b) (c), which permits the importation of margarine, margarine-cheese, and adulterated and impoverished butter, words should be added which will make the artificial colouring of such articles illegal, and compel the importers to state on the packages the composition of the margarine or margarine-cheese, as well as the extent to which the butter or milk has been adulterated or impoverished. The same clause should be strengthened so that in case of its infringement for the second offence the fine shall not be less than £30, for the third offence not less than £50, and for any subsequent offence imprisonment for a term not exceeding two years.

To sec. 7 of the same clause, which permits the addition of preservatives or colouring matter to butter or milk, the words "or colouring matter" should be struck out and others added which would compel importers and dealers in preserved milk or butter to state in large and legible type on every tin or receptacle containing such articles the nature and quantity (with the exception of salt) of such preservatives.

Clause 2, sec. 2, which reads "the Board of Agriculture may communicate the results of the analysis of such samples to the local authority," the word "shall" should be substituted for "may," as the local authority paying for the analysis is entitled, in every case, to information calculated to promote the better administration of the law.

Clause 7, sec. 1, should be amended to compel the occupiers of margarine and margarine-cheese manufactories and wholesale dealers in such substances to state in their registers the composition of these articles, as well as the quantity sold and destination.

Clause 11 should apply to preserved milk as well as separated and skimmed milk.

The opponents of the bill had complained that it went in the direction of protection. If that was so he should have

nothing to do with it, but it was not so. If they levied a duty on an article manufactured or produced in this country, largely consumed by the community, then they protected the producer of that article in this country, but if they levied a duty on an article which was not produced in this country, such as tea, they did not protect any person in this country at all. At present the importers of adulterated goods were offered a bounty for their dishonesty.

MILK.

At Hertford, John Parkins, milkman, of Burnham Green, was summoned for an offence under the Food and Drugs Act.—Mr. Johnson, inspector, who prosecuted, explained that the proceedings were taken out under section 17 of the Food and Drugs Act, 1875. On the day in question he saw the defendant supplying milk to customers in Villiers Street. He (Mr. Johnson) asked to be served with a pint of milk from the can from which defendant was serving customers. This the defendant refused to do, stating that he could have the milk from the churn if he liked. Twopence was tendered for the milk, but Parkins refused to serve it, even when told it was required for purposes of analysis.—Defendant denied that he said the milk in the can was as good as that in the churn.—In reply to the Mayor, Mr. Johnson said he tendered twopence for a pint of milk from the can.—Parkins: I never saw it.—Mr. Johnson: No, you were too excited to see anything.—Parkins accused the inspector of "sharp practices."—The Bench, after a brief consultation in private, considered that the defendant should have served the milk from the can when demanded, but inasmuch as probably he was not aware of this, he was only fined £1, to include costs.

At Great Marlboro' Street Police Court, London, on Monday, 20th March, John William Jones, of 13a, Swallow Street, Piccadilly, was summoned by Thos. Fredk. Strutt, Inspector Strand District, for selling milk which contained 46 per cent. of added water.—The milk was purchased from defendant's barrow in Lisle Street, Soho, and in addition to the cans containing milk, another can was carried containing water, which the inspector was informed was to make up when running short of milk.—Mr. De Rutzen informed defendant that it was as bad as taking money from other persons' pockets, and imposed a penalty of £10 and costs.

JOSEPHINE RUSSELL, of 76, Charing Cross Road, was also fined £7 and costs for selling milk containing 13 per cent. of added water.

WATER AT SPIRIT PRICES.

C. F. SERGEANT, grocer, of 120, Shaftesbury Avenue, London, was summoned for selling gin containing 39 per cent. of water (4 degrees below the legal limit).—In this case the strength of the gin was marked on the bottle, but inasmuch as the Inspector's attention was not drawn to it and as the bottle was delivered to the purchaser enclosed in a wrapper, the Magistrate convicted, and imposed a fine of 10s. and costs.

GOLDEN SYRUP.

At Guildford, the Clydesdale Refining and Packing Company were summoned for having given a label falsely describing the articles sold.—Frederic Cliffe, Food and Drugs Act Inspector, stated that on January 25 he purchased from Emma Jones, grocer, Chertsey, a tin of golden syrup. This on analysis was found to be composed of one-third cane sugar and two-thirds glucose syrup. The label on the tin described it as "pure cane golden syrup," and contained a further statement that it was made from pure cane sugar.—Mr. Barlow, who appeared for the defence, pointed out that there was nothing in the analysis to show that it was injurious to health or that it was unwholesome.—Mr. Cliffe said they did not say that it was injurious to health; what he contended was that it was not of the quality and substance of golden syrup described on the label. Glucose, added the inspector, used to be put in syrup to prevent crystallisation, but since prosecutions had taken place that

had ceased.—Mr. Barlow stated that towards the end of last year proceedings were taken in London and a nominal fine was inflicted, and it was held that it was not proper to use the description "golden syrup" if the article contained glucose. In consequence of that decision his clients sent out notices to their customers, and tickets to be fixed to the tins. The tin in question went from Messrs. Gloster and Sons, of Woking, to somebody else, and then to Mrs. Jones, so that his firm could not help the label not having been put on. The labels which were now in use stated that the golden syrup was mixed with other substances. Glucose was perfectly wholesome. He submitted that his clients had committed a technical offence, but had now remedied it. The offence was committed a long time ago, and there might be tins still going about the country.—The Magistrates' Clerk pointed out that the offence was committed on June 6, and the limitation imposed by the Act was six months.—The inspector said the tin did not come into his possession until January 25, and proceedings were taken forthwith.—The Bench decided that under the circumstances they must dismiss the case.

At Southwark, on March 23, Mrs. Lucretia Cadd, widow, of 90, Park Street, Southwark, was summoned by Inspector Grist, of the St. Saviour's District Board, for selling golden syrup which was adulterated with 40 per cent. of glucose or starchy matter.—The defendant said she supposed the syrup was all right. She bought half a cwt. in April, and sold it in the same condition.—Mr. Topham, for the prosecution, pointed out that glucose was advertised at 9s. per cwt., while the finest golden syrup cost 24s. 9d.—Mr. Slade fined the defendant £3 12s. 6d., including costs.

BORACIC ACID IN BUTTER.

BEFORE the Stipendiary (Mr. T. W. Lewis) at Cardiff Police Court, on March 23rd, Mary Ann Ingram was summoned for selling adulterated butter. Mr. Halloran (from the office of the Town Clerk) prosecuted, and Mr. T. J. Hughes (Bridgend) defended.—Arthur J. Green, inspector under the Food and Drugs Act, deposed that he visited the defendant's shop on the 13th February and purchased 1½ lb. of butter, part of which he submitted to the public analyst, who certified that it contained 1.02 per cent. of boracic acid.—Mrs. Ingram then went into the box and deposed that she received a guarantee with the butter from the wholesale dealer. She had not interfered with it in any way.—Mr. Hughes then addressed the stipendiary, and stated that the guarantee—a copy of which he supplied the prosecution with the day before—absolved the defendant from any blame, and also from any costs, and the stipendiary concurred.

PREVENTING TEA FRAUDS.

THOSE who recollect the "Carrol" refining process for using exhausted tea leaves which we exposed a few years ago will realise how timely was the inspector's action in the following case:

At West Ham Police Court, on March 20th, Mr. Spadaccini, a food inspector of the Port of London sanitary authority, brought to the court 582 half-chests of tea which had been seized in the Royal Albert Docks ex the steamers "Guadalquivir" and "Charente." The tea, which was said to have been submerged in Marseilles Harbour, looked like a mixture of mouldy manure with black and green mud, and Mr. Spadaccini asked for an order to destroy it. Dr. Collingridge, the medical officer of health for the Port of London, in supporting the application, said that he had made experiments and found that, though so bad, the tea could be "faked" and put on the market in such a condition as to deceive the purchaser. Mr. R. A. Gillespie, having examined some of the tea, made an order for its destruction.

DRUG ADULTERATION.

At the West Riding Police Court, on March 21st, Charles Hobson, of Ecclesfield, was summoned for selling

camphorated oil which was not of the nature and standard required.

Mr. Joseph Wilson, Inspector of Foods and Drugs under the West Riding County Council, purchased 40zs. of camphorated oil, which on analysis was found to contain 12 per cent. of camphor and 88 per cent. of olive oil. According to the British Pharmacopœia, camphorated oil should contain 21 per cent. of camphor and 79 per cent. of olive oil.

In reply to Mr. Muir Wilson, who defended, the inspector stated that the standards of the British Pharmacopœia were changed in 1872. Under the old standard camphorated oil could be made of camphor and sweet oil, but if people wanted it made of camphor and olive oil they had to ask for liniment of camphor. Under the present standard camphorated oil was synonymous with liniment of camphor.

Mr. Muir Wilson suggested that the summons should be withdrawn on payment of costs. The standard was changed in 1897, and this oil was purchased by the defendant in September, 1897, having been made under the old standard. Mr. Hobson had no intention to defraud, but it was only right that people should get what they asked for.

Mr. Joseph Wilson said they did not suggest any fraud, and the proceedings were only taken to warn retailers that the standard had been changed.

Mr. Ellis, Thirlwood Road, Sheffield, wholesale chemist, said the camphorated oil in question was made under the old standard, and was supplied to the defendant in September, 1897. It was possible when the oil was being manufactured for some of the camphor to adhere to the side of the pan, and the strength would thus be lessened, whilst evaporation would also account for further loss of strength. As a manufacturer, he would see that the standard as laid down in the Pharmacopœia was adhered to.

George Hemmingfield, of Ecclesfield, was also summoned for selling adulterated milk of sulphur. Mr. Fairburn, who defended, said the fault had arisen through the change in the standard. He suggested that the summons should be withdrawn on payment of costs, as the purpose of the prosecution would be served in giving warning to the retailer.

The magistrates allowed the summonses to be withdrawn on payment of costs, 10s. in each case.

SOMERSET HOUSE AND A TEA ADULTERATION CASE

At the Derby County Police Court, on March 24th, William Henry Woodward and Edgar A. Woodward, bakers, of Draycott, were summoned by Captain Sandys, Inspector of Weights and Measures, for selling four ounces of caper tea which was adulterated with at least six per cent. of ferruginous sand and small stones, at Draycott, on January 23rd.—Mr. R. S. Clifford prosecuted, and Mr. B. W. Moore defended.—Mr. Clifford said that when the case was previously before the court he called sufficient evidence to prove the purchase of the tea, which was divided into three samples. One of those samples was analysed by the county analyst, and Mr. Moore applied to the court that the second should be sent to Somerset House for analysis. This request was granted, and the case adjourned. The second sample was sent to London, and the analysis made there confirmed that made by Mr. White. The third sample was sent to the Warwickshire county analyst, with the same result. He (Mr. Clifford) objected, however, to a footnote to the analysis made by the Somerset House authorities being given in evidence, and cited a number of decisions in higher courts upon the subject. He also asked for an adjournment of the case in order that the gentleman who made the analysis might be put into the witness box, and state on what basis he formed the opinion he had given as to what amount of adulteration was permissible. Dr. Bell, in his well-known work, had stated that the adulteration should not exceed 1 per cent.; in consequence of a certificate from the Somerset House authorities, the Chesterfield magistrates dismissed a case in which

the adulteration amounted to 3 per cent; but in this case the adulteration was over 6 per cent. Mr. Clifford added that he should also call Dr. Bostock Hill, one of the professors at Mason's College, Birmingham. If the magistrates eventually came to the conclusion that there should not be a conviction, then he (Mr. Clifford) would ask for a case to be stated, in order that a higher court might settle the question of what was too much adulteration.—Mr. Moore objected to the application on the ground that his client was only a small country grocer. In point of fact, this tea was originally in bond, was analysed by the Somerset House authorities, and was by them passed as fit for consumption. If it were suggested that the defendants had adulterated the tea since it came out of bond, then there might be something in the present application; but the question the prosecution wanted to settle was whether the Custom House authorities had been guilty of negligence. Under the circumstances, he (Mr. Moore) should ask—if the magistrates decided to adjourn the case—that the defendants should be granted the full costs of that adjournment.—The magistrates decided to adjourn the case for a month, but made no order as to costs.

FRENCH ADULTERATION LAW.

ALPHONSE KARR once perpetrated an ingenious epigram: "I poison the grocer—guillotine; the grocer poisons me—ten francs." But in France, as some recent prosecutions go to show, there is not only ten francs fine, but the compulsion to put up in large print in two places in your shop that you have been convicted and fined for adulteration, and to keep this interesting memento there for many months.

THE SANITATION OF REIGATE.

MR. J. P. HUMPHREY, A.S.I., the Sanitary Inspector for the Borough of Reigate, states that, with respect to the water supply, extensive alterations are being carried out by the East Surrey Water Company at their works at Reigate, also that arrangements have been made with the Godstone Rural District Council and the Sanitary Committee to take samples alternately and exchange results of analyses of the Kenley supply, thus ensuring the water being analysed at regular intervals. The borough, it is stated, will favourably compare with most towns with regard to the carrying on of any other business with that of a milk vendor. As the inspector observes, "nothing is more reprehensible than the incongruous collection of paraffin, vegetables, sweets, meat, and milk, but fortunately in this borough we have only three such places, and I have no doubt that as the populace becomes alive to the importance of a wholesome milk supply, legislation will step in to prevent such anomalies." It is satisfactory to note that some of the cow-keepers in the Borough, and some outside, who supply our purveyors, are adopting the tuberculin test, and improving the sanitary condition of their cowsheds. Suggestions for the erection of a public abattoir have been printed and circulated, and this is a matter which certainly needs instant attention, for the state of the slaughter-houses in Reigate Borough leaves much to be desired.

CAMEMBERT CHEESE.

THE name of this celebrated product is derived from a village in the department of Orne, France, where, during the great Revolution, a woman, Marie Harel by name, first made it. The method remained a secret until 1813, when the children of Marie Harel became married and set up small factories in different parts of Normandy. At present there is no secrecy about the Camembert cheese. It is made in the following manner:

Immediately after milking the milk is set in a wooden bucket at a temperature of from 50 to 55 deg. F. In a few hours it is skimmed, whereupon a proper amount of rennet is added. The curd is formed after standing six hours, during which the temperature should be as nearly

90 deg. F. as possible, especially at the beginning. In the home cheese manufacture this is effected by placing a wet cloth over the bucket.

When a curd has been formed it should be taken out with a skimmer and placed in a cheese-mould, which stands on a slanting board in order that the whey can drain off completely. In two days the cheese will be ready to leave the form. Each loaf is then salted thoroughly on all sides, whereupon it is left thus for four days, when the drying begins.

In drying this cheese care should be taken that it is placed where the breeze can touch it directly, such as immediately behind the window-screen. They must rest upon straw mats, and be turned from day to day. In the course of five weeks, when sweating sets in, the so-called refining begins. This means that the cheese is placed in a dark, dry cellar without ventilation, and where a temperature of 50 deg. F. is kept as nearly as possible. They must be turned every other day for about a month, and they are then ready for marketing.

This is the salted Camembert. It can be made without salting, but in that case will keep only a short time before decaying.

GOLDEN SYRUP.

MR. C. A. SEYLER, analyst to the Glamorgan County Council, reports that during the past quarter he had analysed 247 samples of food and drugs. Twenty of these, or 8.09 per cent., were adulterated, or, excluding the samples of butter containing boric acid, fourteen, or 5.67 per cent. Of the samples of butter twenty-three were genuine and free from boric acid, but six, or 20.8 per cent., contained additions of boric compounds ranging from 0.48 to 0.08 per cent. In no case did the amount exceed 0.5 per cent. This was a great improvement on previous quarters. No beef stearine or cottonseed oil was found in any of the samples of lard. All the farinaceous foods were also free from harmful ingredients. Nine samples were received of golden syrup. "Of those" (said the analyst) "one was genuine, but thin and of poor quality. Four samples were grossly adulterated with commercial glucose syrup. This product is made from starch by the action of acids, and, while not harmful, there can be no doubt that its presence is an adulteration, especially in large quantities. These samples I estimated to contain at least 84, 78, 75, and 60 per cent. respectively of this foreign ingredient. Golden syrup should be entirely the product of cane sugar, the starch glucose being much less sweet and devoid of aroma. All the remaining samples (with the exception of one brand) gave evidence of the addition of small amounts of starch sugar, no doubt added to prevent the syrup from granulating. Whether these samples should be regarded as genuine is open to doubt. Dyed crystals continue to be largely sold under the name of 'Demerara sugar.'"

THE SO-CALLED ACTIVE PRINCIPLES OF COD LIVER OIL.

THE chemistry of cod-liver oil is at present in a very unsatisfactory condition, in spite of the numerous investigations of which it has been the subject. The peculiar medicinal properties of this oil—properties which are possessed by no other vegetable or animal oil—have led numerous chemists to examine it with the object of determining to what ingredient or ingredients it owed its value.

The result of these various analyses is confusing in the extreme. Upwards of fifty distinct substances have been isolated from the oil by different chemists, and these include eighteen organic and inorganic acids, eight elementary substances in combination, biliary principles, amines, alcohols, glycerides, resins, colouring matters, and various substances of an alkaloidal nature. It may be observed, in passing, that all but three of these exist in from three to five per cent. of the oil.

There are three varieties of oil found in commerce, termed, respectively, the white or pale yellow, light brown, and dark brown, according to the method of manufacture.

There is no essential difference between these varieties, the variation in colour being due to the method of preparation. The pale yellow oil is now almost exclusively used for medicinal purposes, and it is the constituents of this oil to which our attention must be principally directed.

[Here the author gives at length the results of researches which have been carried on by De Jongh, Gautier, Wurzer, and a host of others. Lack of space prevents our giving all this in detail, and so we pass on to the conclusions which the author reaches.—THE EDITORS.]

To sum up the results of all these researches is not easy, in view of their conflicting character. Experience, however, had taught us certain facts even before chemists had experimentally proved their correctness. It has shown us that, for medicinal purposes, the pale yellow oil is superior to the old and nauseous brown oil, and that the less the extractive matter contained in the oil the more easily it is assimilated. Improved methods of manufacture have taught us that cod-liver oil need not contain any of the principles peculiar to the organ from which it is obtained. The later researches have shown that the virtues of cod-liver oil cannot be dependent on the amount of halogen or phosphorus present, seeing that, if present at all, the quantity is too minute to exert any therapeutic effect. The work of Carles shows, indeed, that if proper precautions be taken cod-liver oil can be prepared free from iodine or phosphorous compounds. Bucheim and Salkowsky have proved the absence of bile acids and biliary compounds, and the work of Heyerdahl has upset all those ideas of the chemical composition of cod-liver oil which have been handed down to us since chemists first examined the oil. Finally, the work of Gautier and Mourgues has dispelled any idea of cod-liver oil possessing an active principle, and has taught us what experience had long before pointed out, that the medicinal properties of the oil were *sui generis*, and did not depend on the presence of extractives.

The pale oil does not contain alkaloidal bodies, nor the various leucomaines or ptomaines isolated by Gautier and Mourgues. These are found only in the brown oil, and it is necessary to emphasise this statement in view of the claims made by manufacturing houses that these amido compounds are the active ingredients in cod-liver oil. There is no doubt they possess some physiological activity, but no such claims as above stated were made for them by the discoverers, and such claims cannot, in view of practical experience, be upheld.

A word must be said concerning the substance known as "morrhual or gaduol." Examination of this body shows it to be simply an alcoholic extract of the brown cod-liver oil prepared probably in the manner suggested by Chapoteau. It possesses the odour and taste of the brown oil and contains the amido compounds and alkaloidal bodies mentioned above. A good sample of brown oil will yield from 5 to 10 per cent. of "morrhual." From it the so-called wines of cod-liver oil are prepared.

It is evident from the facts here set forth that the textbook descriptions of cod-liver oil need considerable correction, and that future work on cod-liver oil must be directed not to examination for supposed active principles, but to accurate determination of the composition of the fatty acids and glycerides.—Portions of an article read by E. H. GANE, Ph.C., at the recent quarterly meeting of the New York College of Pharmacy.

STERILISED MILK.

A CORRESPONDENT of one of the agricultural journals calls attention to a point which is worth consideration. At the present moment, when medical men, and to some extent the public, are losing their heads over the "dangers" of milk, the common suggestion made is that it should be sterilised. At a recent meeting, Dr. Voelcker, who, though not a doctor, is a very able and well-known chemist, entered a timely protest against the idea that sterilised milk and other prepared substitutes are as good for young children as pure, fresh milk. It is generally admitted that boiled milk undergoes a change which does not improve it from a nutritive or digestive point of view, and there would

certainly be some reason to suppose that sterilisation equally may not effect a beneficial change. Killing bacterial life is all very well, but are we quite sure that in attempting to get our food free from bacteria—an impossibility, speaking literally—we may not be doing harm as well as good, and possibly more harm than good? At the present time no doubt there is a sort of craze in the scientific mind—which is as subject to impulses as ordinary folks—and sterilisation of everything is set up as an ideal; but experience teaches that in course of time views of this extreme kind become modified with fuller knowledge. From some recent experiments, conducted in America, it appears that no less than thirty-nine different micro-organisms in milk are capable of surviving the process of pasteurisation or sterilisation, i.e., a temperature of 155 to 160 degrees Fahrenheit. Some of these obstinate varieties were studied, and although they came from various sources, among others, the dust in the air of the byre and the dirt on the cow, they were quite harmless. Some exercised a curdling effect on the milk, others peptonised and rendered more digestible the caseous matter, and others still produced no change that could be discovered. In another series of experiments an American scientist caught and examined 68 different kinds of bacteria in the vicinity of the dairy, the majority exercising, so far as could be traced, no effect on milk, and most of the others being favourable to the production of butter.

THE ADULTERATION OF FOOD PRODUCTS FOR EXPORT ENCOURAGED BY FOREIGN GOVERNMENTS.

THE "beneficent paternalism" of Germany and France has evolved elaborate systems of laws controlling the food products, articles of diet, food and drink, to guard their people from injury by fraudulent adulterations. These laws are of the utmost minuteness and rigidity, and their execution is placed in the hands of an army of officials scattered throughout both countries, in every town and hamlet. Every violation, however trivial, is rigorously punished by fine or imprisonment, or both, at the discretion of the officials.

With all this care and supervision over the health and well-being of the citizen, we note that the patent offices of both countries are in the habit of granting patents for machinery and processes, the sole object of which is the facilitation of adulteration and sophistication of articles of food and drink. In one German journal appears the announcement that a patent had been granted by the Imperial German patent office for "a machine for moulding coffee beans out of any plastic material," and another for "a process for the adulteration of roasted and ground coffee with tannic acid." Another patent was issued, some time since, for a process of preparing olive hulls, to be used in a similar manner.

The French patent office has time and again granted patents for similar devices, and since the products of these machines and processes cannot be sold to the consumer in either country without violation of the laws, the question arises—what becomes of these adulterated and sophisticated goods? That the machinery and processes are in use there can scarcely be a reasonable doubt, and that there is a market for their products is reasonably certain.

The only inference that can be drawn under the circumstances is that they are sold for foreign consumption, and that with the full knowledge of the Government officials of both countries.

ADULTERATION OF FERTILISERS.

THOUGH the Fertilisers and Feeding Stuffs Act, 1893, should be a boon to the agricultural community, remark Messrs. H. Jones, Langar, and Co., in their circular just issued, there are ways and means by which it is evaded by unscrupulous traders. Witness the reports appearing from time to time in "The Royal Agricultural Journal" of the cases of wilful misrepresentation and adulteration, and we see no reason to modify the views expressed for years past in this circular, that the only true safeguard against

imposition is to deal with firms of high integrity, who have their reputation to uphold, and who, by-the-way, are content with a minimum remuneration on the value of the turnover, much less than is the custom in many other businesses. The London agricultural Press now furnish weekly reports from all the leading out-ports, giving an impartial summary of the wholesale transactions and the current values in these markets, which enable the agriculturist to select the most favourable port, and obviously anything offered to him below those figures should be regarded with a certain amount of suspicion, and if the deliveries were tested, not a few isolated cases would show the quality to be inferior to that contracted for; but how few there are who resort to analysis to verify the sellers' representation, and it is upon this knowledge a certain section trade. Purchases continue to be made indiscriminately, a slight "apparently" monetary gain oftentimes being sufficient inducement to buyers to ignore the offers of reliable vendors, and in the event of the crops not benefiting to the extent anticipated unknowingly conclude it is owing to climatic influences, or some other cause; whereas in the majority of such cases (we speak particularly of those purchases made below the market values) it is the inferiority of the fertiliser that is at fault. Our long experience of the trade prompts us to but one conclusion—from whatever market you purchase do not contrast the prices of unknown vendors with those of firms who are known to supply the article as represented, as it is equally to your interest to uphold their integrity for the benefit of agriculture generally.

THE FRENCH DAIRY INTEREST.

We are so apt to consider the Danes, and the Danes only, as our great rivals in the production of dairy delicacies, that we overlook the other nations who have turned their attention to this particular industry. We must correct ourselves. In southern England, those parts nearest Normandy, there is some knowledge of French enterprise. Of course it is natural that perishable goods should be landed at the nearest port, so we on the east and northern coasts are more conversant with Danish wares than we are with those of "La Belle France."

From early Norman days these two countries, separated by a silver streak, have been more or less antagonistic. We have scoffed at and despised the "Mounseer," and he has made game of "John Bull." First one of us, and then the other, has had the advantage, but, on the whole, affairs have been pretty evenly balanced, and we can neither give each other great odds. Indeed, when we consider how much Norman blood runs in our veins, it is no wonder we are in many things so much alike. Climatic influences bring about the differences, but racially we are in a measure one.

The enterprise of the Frenchman does not stop at butter and cheese, he actually has the audacity to send us over milk; but it is not with his milk exports we are at present concerned, it is more his butter and his cheese. The writer of to-day, a man at home equally on an African "veld" as on a Norfolk pasture, does not give, as an eye witness, the most pleasing accounts of the butter and its surroundings as found in Brittany.

The custom appears there for the butter to be gathered up from all the small farmers (peasant proprietors) and then re-made, worked, and blended in a manufactory. Well, that is not quite our idea of the way to make good butter, but this mixture or manufactured article finds a ready market. We should not like the raw material. The French farmhouses and surroundings (the small ones we mean) are not arranged with much idea as to sanitary matters, and the people themselves are too hard pressed by constant toil to be ultra-particular about the methods employed.

We should prefer that the manufactories began with the milk rather than with the already made up butter; there would be more chance of rudimentary cleanliness at any rate. In northern France we find a good class of cow, very much after the stamp of our Shorthorn, and it is to these northern provinces that we look for butter production. The

grass land of Normandy is sound and good, well calculated to produce milk, and also well calculated to produce grand, well-developed cart horses. The principal butter districts are the departments of Ille et Vilaine, whence come 18,000,000 lbs. of butter; Nord, touching on Belgium, Pas du Calais, and further west, Calvados and Manche. This butter is sold by the kilogram, equal to 2.2 lbs., and the price varies from rs. 3d. to 2s. 4d. per kilogram, just about what most English farmers get for theirs. We do not often fall below 7½d. per lb., and do not often exceed 1s. 2d., although we see that for two weeks in August we actually made 1s. 4d., and in October and November 1s. 3d. (This was owing to the prolonged drought, which caused great scarcity of food).

France produces yearly somewhere about 136,000,000 kilograms of butter as against Denmark's 50,000,000, and Italy's 16,500,000. But after all it is not in butter production that France exceeds the other nations—she takes the lead in cheese, and gives us cheeses many and varied. The working classes of France have always been much more frugal than the same class in England. They live more carefully and on a plainer diet, vegetable soups, salads, any bread but wheaten, no beer, and not much meat, not half the luxuries that the British workman demands.

Of all forms of food nothing is much more concentrated than cheese. It may be a little hard of digestion, but when that is accomplished the system is enriched by many valuable constituents. The Englishman does not put cheese quite in its right place, he uses it as a finish to his meal rather than making it the pièce de resistance. Cheese is not consumed by the working classes as it used to be. In our young days most farmers made at least a few cheeses to be used for himself and his men, and now, except in the cheese districts proper, where is the cheese-maker? Gone with the home brewer and bread maker.

Cheese used to be sent out always for afternoon luncheon in harvest, and filled many a gap at other times; now cheap pork pies and cakes take its place. The French are very proficient in soft cheese manufacture—the taste for these goods is certainly growing in England, but slowly. Our dairy teachers are now prepared to show us how to make many varieties of small inexpensive cheeses, but the market is not quite here yet. We stick to our hard varieties, and for a change in summer enjoy a real cream—an expensive luxury only for the few.

Like the hard or pressed cheeses the soft ones can be made either plain or rich. It is simply a question of removing the cream, and for immediate consumption the plain cheeses are most excellent. They are made up into small shapes, easy of purchase, easy to consume, and form a most pleasing variety in the menu. Whether we as a nation shall ever take the matter up seriously remains yet to be proved. France makes £2,500,000 of her hard cheese, but a good deal more of her soft cheese. When the English palate is sufficiently cultivated, perhaps the English farmer will be found ready to put on the market such and similar varieties known abroad as Brie, Loudom, Miers, and Camembert.—"Journal of Horticulture."

THE COLOURING OF MARGARINE AND THE FOOD AND DRUGS BILL.

THE following letter has been addressed by Lord Templetown, President of the National Agricultural Union, to the various branches of the Union throughout the country:

"DEAR SIR,—As we hear, on good authority, that if an Amendment to the Food and Drugs Bill, making the colouring of margarine to imitate butter illegal, is carried, the Government will drop the Bill, I should be glad if you would inform the member for your constituency whether, in the opinion of your Branch or Council, the Bill should be carried as it is, leaving the colouring of margarine to imitate butter legal, or whether your Branch prefer losing this Bill.

"I would draw your attention to the report of the Select Committee appointed to inquire into the working of the

Margarine Act, 1887. That Committee says: 'Your Committee cannot but feel that the adulteration of butter with margarine and the fraudulent sale of margarine for butter are greatly facilitated by the artificial use of ingredients to colour margarine, and they cannot, in the interest of honest trading, arrive at any conclusion other than to recommend the absolute prohibition of artificial colouring of margarine to resemble or imitate butter.' As it is obvious that consumers should be adequately protected from fraud, I have no hesitation in urging you to insist on an Amendment to the Bill embodying the recommendations of the report of the Select Committee as quoted above."

NUTRIMENT IN MALT LIQUORS.

WINES and malt liquors, while containing far less alcohol than the distilled liquors, do contain a definite amount of nutritive material. Perhaps the best definition of beer as brewed to-day is that of a fermented saccharine infusion to which has been added a wholesome bitter. It consists of water, alcohol, carbonic and acetic acids, and bitter principles from the hop. According to Prof. Atwater's investigations, "Ale, beer, and wine contain small quantities of nutritive material in addition to their alcohol and other constituents. That of wine consists mainly of compounds akin to carbohydrates, and averages a trifle over 3 per cent. of the whole weight. That of ale and beer includes, on the average, a little over one-half of 1 per cent. of protein and other nitrogenous compounds, and 6 or 7 per cent. of carbohydrates and allied substances. A pint (pound) of ale or beer would contain, roughly speaking, about as much of these nutritive substances as one and one-fifth ounce of bread; and a pint of wine about as much as three-quarters of an ounce of bread."

DISTILLED WATER A POISON.

In a recent number of the "Deutsche Medicinische Wochenschrift," H. Koeppe points out that distilled water is a poison. This conclusion is based upon the grounds that single-celled organisms die in water that has been distilled; because the water contains no salts it deprives the organisms by osmosis of the salts that are necessary to life. When distilled water is freely ingested the epithelial cells of the stomach are destroyed and thrown off, and the local poisoning produced is evidenced by nausea and vomiting.

CHESHIRE COUNTY COUNCIL AND THE SALE OF FOOD AND DRUGS BILL.

A SPECIAL meeting of the Weights and Measures Committee was held at Crewe, on the 14th inst., to consider the provisions of the above Bill now before the House of Commons, and the clerk submitted a report thereon by Mr. W. D. Laird (chief inspector of weights and measures). The following is an extract:—"The first eleven clauses of the proposed Bill deal exclusively with milk, butter, cheese, margarine, margarine-cheese, and condensed separated or skimmed milk, and the proper labelling of the last three named articles. Provision is made for the taking of samples by the Commissioners of Inland Revenue; for the analysis of such samples by the Government Analyst; and for prosecuting the importer of the before-mentioned articles if they are shown upon analysis to be other than they are represented to be. The Board of Agriculture are to have power to appoint officers to take samples of agricultural produce in any part of the United Kingdom, and in the event of a local authority failing to enforce the Food and Drugs Acts the Board of Agriculture may, under certain conditions, appoint officers to enforce the Acts and charge the defaulting authority with the cost. The Board of Agriculture are also empowered to make regulations for the guidance of analysts in determining the purity, or otherwise, of milk, butter, and cheese. Manufacturers and wholesale dealers in margarine and margarine-cheese are to keep a register of the quantity and destination of each sale, and this register is to be open to the Board of Agriculture for inspection. No margarine is to contain more than

10 per cent. of butter fat. The provisions of the Margarine Act are extended to margarine-cheese, and the printing on the wrapper referred to in section 6 of the Margarine Act is to be in letters of not less than half an inch in length, and no other printed matter is allowed on the wrapper. When samples of milk or margarine are taken in course of delivery a portion of each sample is to be forwarded to the consignor."

The committee, after considering the various clauses of the Bill and the foregoing report of the chief inspector, thereon resolved—That in the opinion of this committee the Bill should be amended as follows, viz.:—Clause 6 (2). That the letters required to be printed shall in case of more than one wrapper be printed on all the wrappers. Clause 11. That the label on which the words "Separated Milk" or "Skimmed Milk" is printed should also state that such milk is "Milk from which most of the cream has been abstracted." Clause 15. That the word "a," in line 36, between the words "in" and "tin," should be omitted, and that the words "an unopened" inserted in lieu thereof. Clause 19 (2). That a public analyst should be an analyst appointed under section 10 of the Sale of Food and Drugs Act, 1875, and that a copy of the certificate of such analyst should be served on the prosecutor at least three days before the hearing. That additional clauses should be inserted—providing—(a) That the mere posting in a public house of a notice stating in general terms that the spirits sold therein are diluted should be no defence to any proceedings under the Acts. (b) That all margarine on sale by retail be exposed to the clear view of the purchaser. (c) That it shall be the duty of every local authority to enforce the law (see Clause 1 of Sale of Food and Drugs Bill, 1897), and that if any local authority fails or neglects to do so provision should be made for the enforcement thereof by the Local Government Board or other Government department. It was also resolved that the foregoing suggested amendments be communicated to the secretary of the County Councils' Association in time for the meeting of the Parliamentary committee of that association on the 16th inst.

Dr. Hodgson (chairman of the committee) moved the adoption of the minutes, and pointed out the importance of the amendment to section 15. If that section were allowed to pass unamended it would give great facilities for adulteration. He also directed attention to the fact that the Act provided that no margarine was to contain more than 10 per cent. of butter fat.

Mr. W. McNeill seconded, and the committee's report was adopted.

WHAT IS VINEGAR?

MR. J. BRODIE, of the Cambrian Vinegar Co., Leeds, writes:

"For several years past numerous shopkeepers have been convicted under the Adulteration Act of selling as malt vinegar, or even as vinegar, an article which was proved to be composed almost entirely of dilute acetic acid, coloured with caramel or burnt sugar.

"Recently, however, there seems to have been considerable confusion in the magisterial mind. At Bristol lately a shopkeeper was charged with selling as vinegar a mixture composed of 98.95 per cent. of dilute acetic acid and 1.05 of colouring matter. The case, in this instance, was dismissed without costs. About the same date a Liverpool shopkeeper was charged with the sale of a 'vinegar' composed principally of acetic acid and water, but flavoured with a proportion of malt vinegar and coloured with caramel. In this case a fine of £5 and costs was imposed.

"The question is now asked, 'What is vinegar?' and it appears to us that until this question is answered the producers of genuine malt vinegar are under a great disadvantage. The word vinegar is derived from the French 'vin-aigre,' which literally means 'sour wine,' and practically most of the vinegar used on the Continent is what its name implies. In England, however, the malt vinegar sold is produced by vinous and acetous fermentation, while the

spurious vinegar is made by diluting acetic acid (an article made by the 'destructive distillation' of wood) with water, and colouring it with caramel to match the appearance of malt-vinegar.

"It may be argued that dilute acetic acid is perfectly pure and wholesome. If this be so, why not preserve its appearance, which is exactly that of water, and why not sell it as 'dilute acetic acid,' or even as 'wood vinegar'? Then the public would know exactly what they were buying. As it is, it is manifest that the public are being grossly misled, and in practically every case buy this coloured mixture under the impression that they are getting 'malt vinegar.'

"If, as apparently is the fact, the Adulteration Act does not in every case secure a conviction, we think it only right that it should be amended, so as to protect not only the public, but the makers of a genuine article."

DEATH OF MR. RICHARD CADBURY.

MR. RICHARD CADBURY, of Cadbury Brothers, of Bournville, Birmingham, died at Jerusalem on March 22nd. He was born about 1836, and was the eldest son of the late Mr. John Cadbury, the founder of the business which now has world-wide ramifications. After completing his education he started life in his father's establishment. The manufactory was then in Bridge Street, and the hands numbered seventeen all told. Somewhere about 1860, says "The Grocer," Mr. George Cadbury, who had served his apprenticeship at Rowntree's, at York, joined the firm, and the father retiring left the two younger men in charge of the business. In 1872 they purchased a few acres of land at Bournville, and laid the foundation of the extensive establishment which to-day employs nearly 1,500 people. Before leaving Bridge Street the efforts and energy of the two brothers had secured for the firm a splendid reputation. During the first two years at Bournville the business nearly trebled, and it has continued to make rapid strides ever since. As employers, the Messrs. Cadbury were held in high esteem, and the factory at Bournville was generally looked upon as a model establishment. Nearly all the work done was upon the piece-work system, consequently the maximum output was always secured. Such an occurrence as a strike or a wages difficulty was never known. On the arrival of the workpeople in the morning they assembled in the women's dining-room, and united with their employers in listening to a chapter of the Bible, read by one of the firm, and followed by a few words of practical Christian counsel. No effort or expense was spared to make the conditions under which their employees worked as comfortable as possible. In addition to cooking, dining, and recreation rooms, there are pretty retiring arbours in the gardens connected with the works, and rooms in which the girls may retire for reading or pleasant gossip. His interest in the social well-being of the working classes was not restricted to his own employees, for Mr. Cadbury was always ready to assist working men in any movement for their benefit. Indeed, it would be difficult to say when his philanthropic work began, or to say how long its effect will be felt. He was a prince of philanthropists. The day before he left Birmingham he was present at 6.30 in the morning at a class for men at the Moseley Road Board School, which he established nearly twenty years ago, and which was regularly attended by 1,500 adults. For the accommodation of these he has just erected, at a cost of £40,000, a magnificent hall and institute in close proximity to the schools. The building was to be formally opened shortly after his return, and Lady Henry Somerset and Dean Farrar had been invited to attend. In addition to this, Mr. Cadbury's generosity was responsible for the Temperance Institute, in Corporation Street, which was built entirely at his expense. His gift of Moseley Hall as a sanatorium for women was another evidence of the generous spirit which characterised Mr. Cadbury's public career. Prior to the transfer of the hall, Mr. Cadbury resided there for several years, during which time the hall

and grounds were ever at the disposal of those promoting Sunday-school treats and temperance and social gatherings. This gift was valued at £33,000. He gave £1,000 to the Police Institute, and promised another donation; he built alms-houses for retired employees near his works, and thirty-eight dwelling houses to provide a fund for the former. The entire outlay on these buildings irrespective of the sites was £70,000. The annual drain upon Mr. Cadbury's purse must have been almost fabulous. He practically maintained thirty home missionaries and secretaries of adult schools, philanthropic and other institutions engaged in Birmingham and the district. His purse was open for every good cause, and hospitals, police institutes, industrial schools, Christian associations, and other bodies, all drew largely upon his generosity. The great bulk of Mr. Cadbury's benevolent work was done in secret. He was the president of upwards of twenty cricket clubs, to all of which he was a generous contributor. A Liberal in politics, he had many opportunities of entering Parliament, but steadfastly refused. He was a member of the Society of Friends and of the Peace Society. On the occasion of the Queen's Jubilee he presented every child in the Board Schools in the city with a Bible. On Thursday morning a large number of telegrams of sympathy reached the works from all parts of the country, many of them being from travellers.

CORRESPONDENCE.

AGITATION FOR COUNTERVAILING DUTY ON BEETROOT SUGAR.

To the Editor of FOOD AND SANITATION.

SIR,—The *Journal des Fabricants de Sucre* shows that French fabricants extracted 123 per cent. more sugar from a given quantity of beet in 1897 than they did in 1881. Last season the yield was higher. And to produce more than double the quantity of sugar 25 per cent. fewer labourers were employed, and these at lower wages per head. Less fuel was used, and at a lower price per ton.

The German yield is much higher than the French and expenses lower, owing to more scientific working and economies.

So far as we can learn the West India growers have during this period of marvellous progress increased the extraction from cane only some 30 per cent., although cane is, so to speak, par excellence the sugar plant, and the sunny tropics its natural home. While somewhat improving their methods of extraction, our planters have until recently done next to nothing to improve the cane itself. Yet they have known all along that it has been mainly in this direction that such marvellous results have been obtained from beet. Such lethargy seems almost criminal.

However much one may sympathise with individual cases, should our Government help by countervailing duties or in any way an industry that had so let slip its opportunities in this country?

Sugar growing was a paying industry in Cuba before the war in spite of European bounties. And the astute Germans foresee that if the recent improved electrolytic processes are introduced there by the Americans the days of beet sugar as an exportable article are numbered. They are therefore moving heaven and earth to increase home consumption within their own tariff ring fence.

With the exception of France, sugar refining has not been a remunerative industry in any European country for years past. Failures have been more numerous in Germany than in England. It is competition (and lately perhaps cartels) not bounties that have injured our sugar refineries. They have had the full benefit of the bounties. The world's production of refined sugar has for years past exceeded the demand. Unremunerative prices are the result.

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Food and Sanitation.

SATURDAY, APRIL 8, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

All communications for the Editor of "Food and Sanitation" must be addressed to

4, AVE MARIA-LANE,
LONDON, E.C.

CONDENSED MILK versus CONDENSED SEPARATED MILK.

THE report of the deputation which recently waited upon Mr. Long to point out the desirability of preventing the sale of condensed separated milk for infant feeding has led to some confusion in the public mind.

A genuine condensed milk containing all its cream was not objected to by the scientific and other gentlemen comprising the deputation. It is the substance which contains even less than one per cent. of fat, and which is often ignorantly bought by mothers for infant feeding, that has aroused the protests of health authorities. Condensed milk such as Nestle's is an entirely different article, the fat being usually about 13 per cent., and its use in many cases for infants' feeding would be preferable to ordinary cow's milk. Outbreaks of fever, diphtheria, &c., are traced to dairies almost daily, and in addition to this danger there is that of tuberculous infection—serious enough when we have it stated by some of our highest authorities that at least 40 per cent. of our herds are affected with tuberculosis. The use of a genuine and pure condensed milk such as Nestle's has therefore the advantage that it prevents diseases being communicated to the consumer. The public should bear the distinction between pure condensed milk and condensed *separated* milk in mind. The latter has been deprived of practically all its fat for creamery purposes, whilst pure condensed milk contains the whole of the fat of the original milk.

CONDENSED MILK PROSECUTION.

AT Chepstow Petty Sessions Charles A. Morgan, Caerwent, was charged with selling to Thomas Henry Lewis, inspector under the Foods and Drugs Act, a tin of condensed milk from which the fat had been abstracted, without disclosing the facts.—Inspector Lewis deposed that on the 22nd of February he visited defendant's shop at Caerwent and purchased a tin of condensed milk, which was labelled "Condensed skim milk" on one side, and "Pure skim milk" on the other side. He paid 4½d. for the tin, and Mrs. Morgan, who served him, made no statement to him as to the contents of the tin. He divided the contents of the tin into three parts; left one with Mrs. Morgan, delivered another to the public analyst, and the third he produced. The analyst found that the contents of the tin was not skimmed milk at all, but separated milk, which was an entirely different thing, and deficient in fat 60 per cent.—The report of the County Analyst was read, showing that the sample contained only 9 per cent. of fat instead of 2½ per cent., and therefore deficient 60 per cent.—Defendant: Did not Mrs. Morgan say that she had Nestle's condensed milk and the "Anchor" brand of skim milk on the shelf?—Witness: Yes, but that was after I told her what it was for and divided the contents of the tin.—Defendant said he did nothing to the milk, but merely sold it as he bought it from the wholesale people.—The Clerk: That won't do. Your plan would be to buy of wholesale people who will guarantee that the milk is what it pretends to be.—Defendant: How are we to know?—The Clerk: By experience.—Defendant: This will be an experience.—Inspector Lewis mentioned that the milk, which was known as the "Anchor" brand, was prepared in Italy.—The Bench: Can't you do anything with the wholesale people?—Inspector Lewis: Yes, but I can't get at them.—Replying to the Bench, defendant said he had written to the wholesale people, and they replied there was no case against him.—Inspector Lewis mentioned that defendant was liable to a penalty of £20.—The Bench said that, whilst it was true the public had to be protected, but they did not think defendant was entirely responsible. They advised him that the next time he made a payment to the wholesale people he should deduct the fine. They imposed a fine of 5s. and 5s. costs, adding that they did not think defendant did anything wrong intentionally. He had better sell a pure condensed milk like Nestle's.

DEMERARA SUGAR.

At the Spelthorne Petty Sessions, on March 27th, Mr. Chapman, grocer, &c., Edgell-road, Staines, was summoned by Mr. Walter Tyler, district inspector under the Food and Drugs Act, for having sold as Demerara sugar an article which was not of that quality and substance.—Mr. Tyler said that the sugar was supplied to him by a young man named Barnes, who, when asked if it were Demerara, replied in the affirmative. The County Analyst's certificate stated that it was not Demerara sugar, but "sugar coloured with a yellow colouring matter." In consequence of a letter received from Mrs. Chapman since his visit to the shop, he had gone to Uxbridge, in her interest, and verified her statement in regard to the sugar. He had taken this personal trouble, because he knew her to have carried on the business in a highly respectable way.—The Chairman: We know Mrs. Chapman to be a very respectable woman.—Mr. Tyler said he did not ask for a conviction, he would be satisfied with costs.—Mrs. Chapman, who had explained that the mistake was made in her absence, was told by the Chairman that she must pay 10s. 6d., which was only the analyst's fee. The magistrates quite understood that she had had no intention of doing wrong, and they had taken this into consideration.

SEIDLITZ POWDERS.

Middlesex Magistrates ask County Councils to apply for recognition of the British Pharmacopœia in the new Food and Drugs Act.

At the Spelthorne Petty Sessions, on March 27th, Joseph Williamson, a small shop-keeper in West District-road, Ashford, was summoned, at the instance of Mr. Walter Tyler, district inspector under the Food and Drugs Act, for having sold a seidlitz powder which was not compounded according to the British Pharmacopœia, it being deficient in tartaric acid to the extent of 22·9 per cent., and in sodium potassium tartrate and sodium bicarbonate to the extent of 12·6 per cent.

Mr. Tyler said that this matter was considered by the Middlesex County Council to be a very serious one. In the interest of small traders like the defendant that authority was most anxious to put a stop to the evil, and after the evidence had been heard he would respectfully ask the Bench to take a certain course. In view of the fact that there was now a Bill in the House of Commons having special reference to the question of warranty with goods, he would ask their worships to request the defendant's daughter (by whom he was represented) to go into the witness-box, and if they were afterwards of opinion that they should convict the defendant, he would ask them to do something further. In the Bill before the House of Commons there was no provision for recognizing the British Pharmacopœia as a standard, and he suggested the advisability of making a representation to the County Council with a view to steps being taken for supplying the omission. In his evidence Mr. Tyler deposed to the purchase of the powder in question for a penny, and he said it was evidently in the same condition as when received from the wholesale people. Miss Williamson, who served him, said it had been supplied by a Mr. Lovejoy, of Hounslow, and it was labelled, "Pearce, Duff, and Co.'s Seidlitz Powders. Prepared according to the British Pharmacopœia."

Miss Williamson deposed to the powder having formed part of a quarter-gross supplied by Mr. W. F. Lovejoy, of High-street, Hounslow; and Mr. Tyler, remarking upon the probability of proceedings being taken against the persons who prepared the powders, said a palpable fraud was being committed on retail shop-keepers in the county, who were liable to be shot at at any moment.

The Chairman said they must be protected, as there was no possibility of their protecting themselves.

The Bench imposed the nominal fine of 2s. 6d. without costs, Mr. Lafone remarking that ratepayers reaped far more advantage from such a prosecution than was represented by loss to the county in costs.

Mr. Beale: I am a ratepayer; I'll pay my share.

The Chairman (to Miss Williamson): There is no imputation on your father, but we must fine him 2s. 6d.

A summons in respect to another powder was withdrawn, it appearing that in that case the article could not be traced to the wholesale dealer.

The Chairman said the magistrates were unanimously of opinion that representations should be made to the County Council with a view to the recognition of the British Pharmacopœia in the Bill before Parliament.

REVELATIONS OF THE PUTRID TINNED FOOD TRADE.

At the Thames Police-court on March 30th, Joseph Fells, and Vernon Fells, of Sage-street, Shadwell, appeared before Mr. Dickinson to answer adjourned summonses charging them with being in possession of a quantity of tinned food which was unfit for the food of man.

Mr. George Hay Young prosecuted, and Mr. Hawtin, barrister, defended.

The proceedings were instituted at the instance of the Limehouse District Board of Works, and altogether 3,917 tins of condensed milk, lobster, salmon, pine apples, and peaches were seized. On the 2nd of February Dr. Thomas, the medical officer of health, in consequence of a communication made by the Clerkenwell Vestry, visited the defendants premises in Sage-street, and examined a number of tins, which were found to be bad. The whole stock was seized, and Mr. J. Fells made no objection to the tins being destroyed. In one box, containing 72 tins of Honey brand condensed milk, no less than 59 were blown. Fresh labels had been put on many of the tins. Out of 39 tins of "Finest Columbia" salmon, 10 were bad, and from a package of 336 tins of condensed milk no less than 231 were bad. There were also 501 tins of bad sardines, and 72 tins of pineapple were in a like condition. In a shed were 792 tins of condensed milk, all bad, which J. Fells said were intended for pigs' food.

Mr. Fells, in reply to Mr. Young, said the case of bad condensed milk had been returned by a customer, but he could not give the name. He had no entry on his books showing that the case had been returned. He could produce receipts showing that he was doing a bona fide business. He had supplied Mr. Barrett, of High-street, Stepney, on many occasions, and complaints had been received that some were bad. Those were exchanged, as was the custom. Some bad tins of lobster were taken away by his son, and in exchange he gave Mr. Barrett some pears and pineapples. Mr. Barrett had not complained that the pears were bad. About 4 per cent. of the goods supplied to Mr. Barrett might have been bad, but certainly not nine-tenths. He knew Messrs. J. Moir and Sons, and if their percentage was not more than one in 10,000 they were very clever and fortunate. He could not say if the lobsters returned by Mr. Barrett were sold to Mrs. Foulkes, but there was a complaint from that person. Other goods had not been sent in place of those returned. In May, 1898, he sold to another firm fifty cases of salmon, but they were not all bad. In January last year he supplied Messrs. Smith and Co. of Wentworth-street, with four cases of salmon, which he supplied at 14s. 6d. a case. He received a complaint that the salmon was bad, and took them away on the 2nd inst. Mr. Bridger had also complained of goods supplied to him, and he might have received a letter from that gentleman threatening to prosecute him. He knew Mr. Joseph of Duke-street, Aldgate, who bought two cases of pineapple in July. Mr. Joseph complained that they were putrid, and his son offered to change them. There were always blown tins, more or less, on his premises. Customers did come to Sage-street and order goods. He

did not know that the milk he sold to Mr. Ayles was removed by the Rotherhithe Vestry. The pricks on the tins produced were done in a legitimate way by the manufacturers. His business was to supply goods for human food.—By Mr. Hawtin: He never supplied bad tins for good ones knowingly. He paid cash for all his goods. He was made a bankrupt in September last, and his business was sold to his son. The official receiver took the money, and that person knew he was carrying on the business. On November 24 the business was transferred to him, and he had since carried on the business alone. On a former occasion in that court he had stated that his earnings were 30s. a week. The cause of his bankruptcy was the prosecution against him for having blown tins, heard two years ago, and on which he was acquitted. The witness mentioned the names of a number of customers who had always been served with good tins.

Mr. V. Fells also gave evidence, and said he would not swear that he did not tell Mr. Barrett the blown tins went to a bakery. He had sold blown tins indirectly to a baker. It might have been one of his travellers who sold them to the man. They were sold for 1s. 6d. a case. The baker had since gone to the City-road, and 500 tins of unlabelled condensed milk might have been found there a few days ago. He would not swear that they had not sold blown tins direct to this man. He could not say if the latter kept pigs.—(Laughter).

On the application of Mr. Hawtin, who said he had other witnesses to call, Mr. Dickinson adjourned the case.

INTERESTING PROSECUTIONS FOR MILK ADULTERATION AT ABERDEEN.

At Aberdeen, on March 30th, several persons were fined for milk adulteration. The following case is of interest:—

James Beattie, Fifeshill, Countesswells, was charged with having sold milk deficient in cream or fat to the extent of 34 per cent. A plea of not guilty was tendered, and Mr. G. M. Aitken, solicitor, appeared for accused. He stated that accused had suffered prejudice in this case from the length of time which had elapsed between the sample being taken and the analysing of it.

Mr. Jamieson, public analyst, was examined at length as to the constituents of milk, the methods of analysis, and the means by which there might be a deficiency of fat, the principal reasons being abstraction of the cream and watering. His average of 4 per cent. as the quantity of fat in milk was derived from the analyses of thousands of samples all over the kingdom. The lowest percentage of fat he had ever heard of in the county of Aberdeen was 2.5, but that was quite exceptional.

Mr. G. M. Aitken—If I read to you that Dr. Stevenson Macadam, Edinburgh, found that in seven samples of milk he got from one country dairy the fat was only 1.84 per cent. would you accept that as a standard?—I would say it was an exception to the knowledge of all chemists in the country.

Yet Dr. Stevenson Macadam says that was a genuine sample of milk. You admit that Dr. Stevenson Macadam is an authority on this question.—I would rather not say.

The Sheriff.—How do you account for this deficiency?—I do not know. I understand the practise is, though I do not say it has been the case here, that they milk the cows in the evening, let the milk stand overnight, milk again in the morning, skim the milk that had been standing overnight, and mix the two together.

Dr. Matthew Hay gave evidence at considerable length on milk analysis. He had never found the fat in milk lower than 3 per cent.

Mr. G. M. Aitken—Would you agree with the experiments made elsewhere, and especially by Dr. Stevenson Macadam where he found the percentage of fat in the milk from seven country cows 1.84, and yet a genuine sample of milk?—Only if the cows were milked in Dr.

Stevenson Macadam's presence would I accept it; if they were not milked in his presence I would not believe it.

The Sheriff—That is a very extraordinary thing to have on such an authority, but Dr. Hay has suggested an explanation. When you read the statement you get the truth, but you don't get the whole truth. What do you consider the methods of adulteration?

Dr. Hay—There are two principally—the addition of of water and the abstraction of cream. There are others, but they are counted very rare.

Mr. Aitken pointed out that his object was to show that the accused had sold the milk as it had come from the cow, and that accused was not to blame.

The Sheriff said he could not blame the cow; he must go by the Act of Parliament.

After the farmer, his wife and daughter had been examined, the Sheriff said he was forced to the conclusion that accused had committed a contravention of the Act of Parliament. There was no charge of tampering with the milk. He imposed a fine of £4, with the alternative of five days' imprisonment.

WATER AT SPIRIT PRICE.

CHARLES THOMAS GROVES was summoned at Bearsted Police Court for selling adulterated whisky, at Loose, on the 7th February. — Sergeant Foreman purchased at defendant's house, the Papermakers' Arms, Loose, half-a-pint of Scotch whisky, and on its being analysed by Mr. M. A. Adams, it was found to be 2.96 degrees below the legal limit of strength.—Defendant, in defence, alleged that at the time of the sergeant's visit there was a notice in his bar stating that "all spirits sold in this establishment are diluted." It had been there for 16 months.—A fine of 5s. and 11s. costs was imposed.

At Temple Cloud Petty Sessions on March 28th, William George Salmon, the licensee of the Ring of Bells, Compton Martin, appeared to a summons charging him with selling rum 29 degrees under proof. —Mr. Sandford (Hurst and Sandford, solicitors, Bristol) defended.—Evidence of purchase having been given by Sergeant Ball and Constable Pitman, Dr. Alford, public analyst, deposed to the result of his analysis.—In reply to Mr. Sandford, he said he had allowed for the colouring matter in arriving at the 29 degree u.p.—For the defence Mr. Sandford contended first that there was no fraudulent addition of water, the rum having been purchased at 24 u.p., and, according to independent analysis, was now 27 u.p. only, and not 29, caused by the conditions under which the rum was kept. In the next place he should prove that notice of dilution was exhibited, although the police denied seeing it; and, thirdly, he contended that the notice of analysis should have been given by Supt. Brown, who was the prosecutor and the real purchaser of the spirit. Subsequently, on the authority of the case of *Horder v. Scott*, Mr. Sandford withdrew his third defence. —Witnesses having been called, the Bench convicted the defendant, and fined him £1 and £2 4s. 6d. costs.

At Battle Petty Sessions, on March 28, Thomas Marsh, landlord of the Squirrel Inn, Ashburnham, was summoned for selling adulterated brandy on the 24th ult.—Mr. T. Latham, Inspector under the Food and Drugs Acts, having given evidence as to the purchase of the brandy, which, on analysis, turned out to be 31.96 under proof, the defendant, who pleaded guilty, was fined £3 and 12s. costs, his license, however, not being endorsed.

MILK OF SULPHUR.

At Ossett Borough Court, the Ossett Industrial Society, who were represented by Mr. Illingworth (secretary), were charged with selling adulterated milk of sulphur.—Mr. W. Brook, solicitor, defended.—Inspector Crabtree said he called at one of the Society's branches on the 16th ult., and purchased 4oz. of the article, which, on

analysis, was found to contain 79 per cent. of hydrated calcium (lime).—By Mr. Brook: The British Pharmacopœia, 1898, was the standard, and came into force in February of last year. Before that time there was no standard. He had not given notice to tradesmen of the change.—In defence, Mr. Brook submitted that the Society had erred in ignorance. Although there was a standard, people asked for, and would have the old article in preference to the new. He complained that tradesmen had not been notified of the fixing of the standard before proceedings were instituted.—After consultation, Mr. Mitchell intimated that the magistrates believed the law had been unwittingly broken, and a fine of 1s. and costs would be imposed. (The Mayor, being interested in the Society, did not take part in the hearing of the case).

JOHN GIGGAL, grocer, Ossett, appeared to answer a charge of selling adulterated milk of sulphur, and adulterated camphorated oil. In the former case the analyst's certificate showed there was 57 per cent. of hydrated calcium, and 83.8 per cent. of olive oil in the latter.—Defendant pleaded ignorance, and was fined 1s. and costs in each case.

J. SANTON WILBY, grocer, The Green, Ossett, was also charged with selling milk of sulphur which contained 62 per cent. of adulteration.—Joseph Wilby said the milk of sulphur was, as far as he knew, according to law, and he had had it in his shop over two years. He considered it very unfair that two or three persons should be made scapegoats, instead of giving notice to tradesmen in a proper manner.—The Bench inflicted a fine of 1s. and costs, the Mayor remarking that they considered it unfair that these cases should have been brought without previous notice of the requirements having been given.—Mr. Brook asked that the costs of inspector and analyst be not allowed. He thought one case for Ossett would have been quite sufficient. After considering the matter, the Bench decided to allow the analyst's fees for one case only, and that the costs be divided amongst the defendants except in the first case. They also disallowed the inspector's fees, and held that the defendants had not wilfully broken the law, sufficient notice not having been given. The standard, they thought, might have been advertised.

AN ARTFUL MILK THIEVERY AND ADULTERATION DODGE.

At Wednesbury, on March 27, William Butler, of 15, Moore Street, New Town, Wednesbury, was charged before Mr. N. C. A. Neville (stipendiary) with selling milk not of the nature and quality demanded, the same being adulterated with 8 per cent. of added water.—Mr. R. A. Willcock (instructed by Mr. Van Tromp, inspector under the Food and Drugs Adulteration Act) prosecuted, and stated that on the 6th March Mr. Van Tromp went down to the London and North-Western Railway Station at Wednesbury in order to meet the milk cans consigned to Mr. William Turner, a dairykeeper, at Wednesbury. It appeared Mr. Turner had allowed the defendant, who dealt with him, to extract milk when on his rounds if it fell short. In consequence of a statement made by Mr. Turner, Mr. Van Tromp went, on the date named, to stop what was undoubtedly a fraud upon Mr. Turner and upon his customers. One churn from Houghton arrived by the 10.37 train, and another came by the 10.41 from Barton and Walton. Mr. Van Tromp took samples from each of the churns, and left portions with the stationmaster. Mr. Tromp then waited about till 11.45, when Butler came into the station with two cans. First of all, defendant took certain milk from one of the churns, then emptied the milk back again, and then took the milk back from the churn. Having finished with one churn, defendant crossed to the other platform, and dealt with the other churn in apparently the same way. Mr. Toy, assistant to Mr. Van Tromp, purchased half a pint of milk from each of the defendant's cans. Samples were also then taken from the

churns which had been manipulated by the defendant. Both these churns on arrival contained 17 gallons. From one churn it was found that one gallon had been removed, and from the other half a gallon. Defendant had got three gallons in his cans, and said that he had a gallon in when he came to the station. On analysis, the milk which had been taken from the churns on arrival was found to be genuine in both cases. After they had been manipulated by the defendant the milk was found to be adulterated. One can which the defendant carried contained pure milk, and the other had milk which was adulterated by 8 per cent. of added water. The case, Mr. Willcock said, was an exceedingly bad one. One farmer had placed on his can a guarantee as to the genuineness of the milk, and had the milk not been tested upon its arrival it might have gone hard with Mr. Turner and the farmer who had trusted him. Under the circumstances he asked that a substantial penalty should be imposed.

Defendant was further charged with stealing 16 pints of milk, value 2s., the property of William Turner, on the 6th of March.—In this case Mr. J. N. Cotterell appeared for Mr. Turner, and remarked that in justice to his client it should be stated that Mr. Turner had been fined for selling adulterated milk, and since then had made every effort to trace who was committing the offence. Some of his customers had deserted him, and his milk had been looked upon with suspicion, although he had the utmost confidence in the farmers. It was satisfactory to know that the matter had been found out. What he wanted to do was to vindicate the character of Mr. Turner.

Mr. Turner was called, and stated that Butler had been a customer of his for three or four years. He had allowed him the privilege of going to the station and getting milk from the churns when he ran short, provided that he wrote on the tally of the churn the quantity he had taken away.

Mr. A. Turton, who appeared for the defendant, admitted the facts, and said the defendant's family had been engaged in milk-selling all their lives, and this was the first time there had been a charge against any of them. Defendant was a married man, and had a wife and seven small children, and he asked his Worship to take these facts into consideration in dealing with the defendant.

The Stipendiary said this case was certainly as deliberate a fraud as could possibly be committed by anybody. Unfortunately, Mr. Turner had thought the defendant was a trustworthy man, and he allowed him to go and deal with the milk as such. Instead, defendant was a deliberate cunning thief, for if it had not been that he had been watched by the county authorities he would probably have got away himself, and Mr. Turner would possibly have been convicted, and suspicion would have been cast upon the railway officials, and also upon the farmers who consigned the milk to Mr. Turner. Defendant knew all that perfectly well, but did not care a bit for any of these people so long as he could cheat Mr. Turner. A man who could do a thing like the defendant had done was a man absolutely beyond hope, and it was no use dealing with a man like that as a first offender. A man whose mind was so vicious as that of the defendant he (the Stipendiary) was perfectly certain would never be honest. On the charge of stealing defendant would be sent to gaol for one month. On the charge of selling adulterated milk defendant would be fined £2 and the costs, or a further term of one month.

The costs in the case amounted to £4 10s. 6d., and it was in consideration of the heavy costs that his Worship reduced the fine from £5, which he at first imposed on the defendant, to £2.

Subsequently Mr. Turton made an urgent appeal to his Worship, in consideration of defendant's family, to impose a substantial penalty in the case in which defendant was sentenced to gaol, but Mr. Neville said he did not consider that he should be doing his duty if he allowed even a substantial penalty in that case. He therefore declined to alter his decision.

ROTTEN HAMS.

At Guildhall, London, on March 27, Sanitary Inspector Terrett applied to the Alderman to condemn 97 hams, weighing 1,400lbs., that he had seized, owing to their putrid state, at the shop of Mr. Webb, a salesman in the Central Poultry Market, on Saturday.—Mr. Webb submitted that the hams were not putrid.—Dr. W. Sedgewick Saunders (medical officer of health), now stated that all the hams were in a state of putrefaction, and must have been so when seized by the inspector on Saturday.—The Clerk said the question was whether they were bad at the time of seizure.—Mr. Webb: The inspector took them into the condemned meat shed, and that stinks badly. It is not fit for a human being to be in.—The Medical Officer explained that the shed was a stone-floored building with tiled walls, and contained disinfecting chambers. The stink, as Mr. Webb had stated, was caused by the putrid hams themselves.—The Alderman came to the conclusion that the hams were in a putrid condition when seized, and ordered their destruction.

MILK CASES IN NOTTINGHAM.

An Interesting Point.

At the Nottingham Summons Court, on March 28th before Mr. F. Acton and Mr. R. Davies, John Foster, farmer, of Lambley, was charged with unlawfully and wilfully giving a label with a quantity of milk sold to John William Preston, of 21A, Woodborough-road, which falsely described it as genuine new milk with all its cream on. Mr. H. W. Day (from the Town Clerk's department) prosecuted, and Mr. E. Williams defended.—Mr. Day explained that the case was taken out under Section 27 of the Foods and Drugs Act, 1875, and a similar case had not before been brought before the court. In that case the defendant on the 17th ult., gave a label with a quantity of milk to one of his customers, Mr. Preston. Whilst the milk was being transferred to Mr. Preston by the defendant's man the inspector opportunely arrived on the scene, and on being informed by Mr. Preston that he had actually received the milk into his possession he purchased a quantity for analysis, and as the analysis showed that the milk was adulterated with 17 per cent. of added water he was accordingly summoned. Mr. Preston, however, came forward with a warranty, and the summons had to be withdrawn, and the wholesale dealer charged.—Inspector Ward produced the analysis certificate, and two other witnesses spoke to the circumstances.—Mr. Williams submitted that the magistrates must dismiss the case, because neither the seller nor his agent was acquainted with the fact that the sample of milk was going to be analysed, and further, that the defendant had never been supplied with a portion of the milk taken, so that he could have the allegations against himself tested.—Mr. Day, in reply, said that the offence was in respect to the false label, which, he submitted, they had proved, and therefore the precautions spoken of were not necessary.—Proceeding with his defence, Mr. Williams said his client had nothing to do with sending the milk away on the morning to which the complaint referred, but left it to the servants, and he submitted that if the magistrates decided against him on the other point, the fact that he knew nothing about it would go in mitigation.—Mr. Acton said the magistrates thought it was fairer to both sides, considering that that was the first case under the section, and that it was the first time their attention had been directed to the section in relation to proceedings of that character, that they should have an opportunity of considering the question. They would therefore reserve their judgment until April 11th.

Rymer Stainsby, of 8, Prospect-place, Willoughby-street, Lenton, was summoned at the instance of William Crowther Betts, inspector of nuisances, for selling milk adulterated with 15 per cent. of added water, on the 21st February.—The defendant said that there was a mistake. The milk was old, and had been put on one side for cheese.—He was fined £1.

William Shaw, of 1, Pearce's-yard, Bailey-street, Old Basford, was summoned for a similar offence, the adulteration being 9 per cent., and he was fined 30s.

George Lowe, of 37, Bulwer-road, Radford, was summoned under the same Act, the adulteration in this case being 9 per cent.—The case was formally proved, and the defendant fined £2.

LARD.

At Sheffield, on March 28th, William Fell, of Broad Lane, was summoned for selling lard, which consisted largely of a mixture of beef fat and cotton seed oil. Mr. W. G. Collingwood, from the Town Clerk's Department, prosecuted.

Inspector Duro saw in defendant's shop window something that looked liked lard. He went in, and asked for a pound of lard, 2 ozs. of tea, and 1lb. of sugar. He was charged 3d. for the lard. He told the assistant for what purpose he purchased it, and divided it with him. Nothing was said about the quality of the lard when he bought it, but afterwards the assistant pointed to some in a show case, which was labelled "Anglo-American Provision Company's Royal Lily Compound." According to the analysis, the sample consisted largely of beef fat and cotton-seed oil, and the compound could not be distinguished from pure lard.

Defendant admitted selling the compound, but said he thought the label in the show-case was sufficient warning to his customers that it was not lard.

He was fined £1, including costs.

ALLEGED ADULTERATION OF TEA.

At the Derby County Police Court on March 24th, William Henry Woodward and Edgar A. Woodward, bakers, of Draycott, were summoned by Captain Sandys, Inspector of Weights and Measures, for selling four ounces of Caper tea which was adulterated with at least 6 per cent. of ferruginous sand and small stones, at Draycott, on the 23rd January.—Mr. R. S. Clifford prosecuted, and Mr. B. W. Moore defended.—Mr. Clifford said that when the case was previously before the Court he called sufficient evidence to prove the purchase of the tea, which was divided into three samples. One of those samples was analysed by the County Analyst, and Mr. Moore applied to the Court that the second should be sent to Somerset House for analysis. This request was granted and the case adjourned. The second sample was sent to London, and the analysis made there confirmed that made by Mr. White. The third sample was sent to the Warwickshire County Analyst with the same result. He (Mr. Clifford) objected, however, to a footnote to the analysis made by the Somerset House Authorities being given in evidence, and cited a number of decisions in higher courts upon the subject. He also asked for an adjournment of the case in order that the gentleman who made the analysis might be put into the witness box and state on what basis he formed the opinion he had given as to what amount of adulteration was permissible. Dr. Bell, in his well-known work, had stated that the adulteration should not exceed 1 per cent.; in consequence of a certificate from the Somerset House Authorities the Chesterfield magistrates dismissed a case in which the adulteration amounted to 3 per cent.; but in this case the adulteration was over 6 per cent. Mr. Clifford added that he should also call Dr. Bostock Hill, one of the professors at Masons College, Birmingham. If the magistrates eventually came to the conclusion that there should not be a conviction then he (Mr. Clifford) would ask for a case to be stated, in order that a higher court might settle the question of what was too much adulteration.—Mr. Moore objected to the application on the ground that his client was only a small country grocer. In point of fact, the tea, when originally in bond, was analysed by the

Somerset House authorities, and was by them passed as fit for consumption. If it were suggested that the defendants had adulterated the tea since it came out of bond, then there might be something in the present application, but the question the prosecution wanted to settle was whether the Custom House authorities had been guilty of negligence. Under the circumstances he (Mr. Moore) should ask (if the magistrates decided to adjourn the case) that the defendants should be granted the full cost of that adjournment.—The magistrates decided to adjourn the case for a month, but made no order as to costs.

OIL OF JUNIPER.

At Clerkenwell Police-court on March 29, Parke's Drug Stores (Limited), 151, Kensington High-street, was summoned before Mr. Horace Smith, by the Islington Vestry, for selling, on the 14th February, oil of juniper which was not of the quality, nature, and substance demanded.

Mr. Bramall prosecuted, and Mr. Hicks appeared for the defence.

Mr. Bramall said the purchase was made at one of the shops owned by the defendant Company in Islington. The summons against them was for selling as juniper oil a substance not made from the juniper berry, but a concoction which contained a large percentage of turpentine and juice of juniper wood. The price of oil of juniper was 9s. 6d. a pound, whereas that retailed by the defendants was sold (wholesale) at 1s. 10d. a pound. The defendants charged for this particular oil at the rate of 7s. 6d. a pound.

Inspector Cowling proved the purchase of the drug from the defendant's shop.

Dr. Harris, medical officer to the Islington Vestry, said oil of juniper was used as a stimulant and antispasmodic, and as diuretic in dropsy arising from cardiac, liver, and kidney disease. Oil of juniper wood would be inoperative if given in these cases.

Dr. Teed, public analyst, said the article purchased from the defendant contained 30 per cent. of juniper oil and 70 per cent. of turpentine.—Cross-examined: Oil of juniper wood was prepared by distilling turpentine over juniper wood. It was probable that the wood yielded the same oil as the berry. The sample answered the British Pharmacopoeia test for specific gravity. There were articles sold in commerce which were mentioned in the Pharmacopoeia, but which would not comply with the test laid down in that book in relation to them.

Mr. Hicks, for the defence, contended that the oil sold by the defendants was an article of commerce, and that it was mentioned in the price lists of wholesale druggists as oil of juniper. Oil of juniper berry was an article used only by medical men in compounding medicine.

Mr. Horace Smith adjourned the case in order that evidence might be called on the contention that juniper oil was an article of commerce, as distinguished from oil of juniper berry, a drug.

COCOA.

At Illminster Petty Sessions, John Maltravers, shopkeeper, of Broadway, pleaded guilty to a summons charging him with selling adulterated cocoa.—P.C. Pollard stated that on the 27th February he went to defendant's shop and asked for 1lb. of cocoa. He was served with some by defendant's wife, who charged him 5d. for it.—Supt. Jennings proved submitting the cocoa to the county analyst, who certified that it contained 30 per cent. of sugar and starch.—Defendant said he sold the cocoa exactly as he received it from the man who supplied him.—Supt. Jennings said in cases where there was adulteration the vendors usually protected themselves by announcing on a card that the article was sold as a mixture or by stating it was not warranted pure.—Defendant said he had since been supplied with cards to this effect.—Fined 2s. 6d., costs remitted.

THE SALE OF FOOD AND DRUGS BILL.

In the House of Commons on March 27th, on the order for the adjourned debate on the motion for the committal of this Bill to the Standing Committee on Trade.

Sir W. Foster, while favourable to the general principle of the measure, protested against the proposal to send the Bill to a committee upstairs. He contended that such a measure, having regard to the importance of the interests it touched, its far-reaching bearings upon the producer and the consumer, the agricultural interest, and the public at large, ought to be discussed in Committee of the whole House, so that the country might be fully informed as to its provisions. He therefore opposed the motion.

Sir M. Stewart (Kirkcudbright), in supporting the opposition to the motion, said their were many members interested in the Bill who could not have a seat on the Committee, and therefore they would be practically debarred from bringing forward their views on different provisions of the Bill. Keen interest was taken in the Bill outside.

Mr. Lough (Islington, W.) submitted that it was contrary to precedent to send a Bill so important and contentious to be discussed in Committee upstairs. There were, besides, many members who could not possibly attend the Committee.

After a few remarks from Mr. Seely (Lincoln) and Mr. Flynn.

Sir C. Cameron (Glasgow, Bridgeton) asked that the proceedings before the Grand Committee should not be pressed forward at the earliest possible moment. He desired that the Federation of Grocers, which included the organization of shopkeepers throughout the United Kingdom, should have an opportunity of having their case represented.

Mr. Moulton (Cornwall, Launceston) thought the Bill should be treated, not as a matter of trade, but as an attempt to defend large classes of Majesty's subjects from a wrong as bad as highway robbery or pocket-picking.

Mr. Long (Liverpool, West Derby) said he had no desire to deprive hon. gentleman of any legitimate opportunity of devoting their energies to the amendment of this measure, nor did he wish to minimize the importance of the Bill. Every argument that had been used, however, was an argument against sending any Bill to the Committee upstairs. It was perfectly true that speeches made upstairs were not reported as fully as those made in that House (laughter), but with that exception not a single reason had been advanced that would justify this Bill not being sent to the Committee upstairs. If there ever was a Bill which they were justified in sending to the Grand Committee it was this one. A great many of the matters dealt with in the measure required technical and expert knowledge, and the members of the Committee could get, easily and conveniently in the room, information on special points raised in the discussion.

Mr. Lloyd Morgan (Carmarthen, W.) said if the House decided not to send this Bill to the Standing Committee they should also decide that the Standing Committee ought to be abolished.

The motion was agreed to without a division.

DEPUTATION TO MR. LONG.

On March 28th Mr. W. H. Long, the President of the Board of Agriculture, received a deputation from the Butter Association in reference to the Sale of Food and Drugs Bill. Mr. Long was accompanied by Mr. T. W. Russell, M.P., Mr. T. H. Elliott, C.B., Sir Jacob Wilson, Mr. J. W. Clark, and Mr. F. A. Fulford. The deputation comprised representatives of the largest grocery and provision companies in the kingdom, among those represented being the Home and Colonial Stores, Lipton's (Limited), Cooper and Co. (of Glasgow), Whiteley's, the London and Newcastle Tea Company, and the Liverpool and Manchester Grocers' Associations.

Mr. Kearley, M.P., in introducing the deputation, said the object of the association was not to popularise the sale of butter as against margarine, but simply to put down fraud in the sale of margarine as butter. In the last four months they had instituted 150 prosecutions against retailers who had been found selling as butter an admixture containing 75 to 95 per cent. of margarine. Within the last few days they had made a raid at Hammersmith, and as a result of two days' inspection by a single inspector 25 cases were pending. The deputation represented at least 2,000 retail branches in the country and an annual turnover of certainly not less than ten million pounds. Their unanimous feeling was that there could not be a law made too stringent to deal with the persistent adulteration which was being practised in connection with the sale of margarine.

Mr. E. H. M. Denny, the chairman of the Butter Association, thanked Mr. Long for introducing the Sale of Food and Drugs Bill, which the association considered absolutely necessary. The association were not at all hostile to the honest sale of margarine; they only protested against its sale as butter. The mixing for sale of margarine and butter should be entirely prohibited, and retail vendors should be required to procure a licence in respect of each branch establishment. Licences were required in the case of tobacco and wines and spirits, and if they were required in the case of butter and margarine no new principle would be introduced, but an offender could be more easily identified, and if the licence were endorsed and liable to be withdrawn in the case of repeated offences it would act as a deterrent. A central staff of supervisory travelling inspectors—women as well as men—should be appointed, and should have compulsory powers to search the premises of butter or margarine manufacturers. The profit on selling these mixtures was so great that the existing penalties were not heavy enough to act as deterrents. The association, therefore, suggested that the fines should be raised to a *minimum* of £10 for the first offence, and a *minimum* of £100 with the alternative of a month's imprisonment for the third offence. They also suggested that all butter and margarine manufactories within the United Kingdom should be registered at the Board of Agriculture, and the factories should be subject to periodical inspection. It was a matter of common knowledge that many gentlemen were appointed through local influence to the post of public analyst who were quite unfitted for the position; and to avoid this in the future the association recommended that candidates for the position be required to undergo a public examination for their fitness. The association also suggested that there should be really distinctive wrappers and packages, and that assistants who knowingly sold margarine for butter should be penalised.

Mr. J. C. Lovell, as a butter merchant of 45 years' experience, declared that it was the mixtures which led to the gigantic frauds which were practised, and that nothing short of the power of imprisonment would stamp the frauds out.

Mr. W. H. Grigg, vice-chairman of the Sanitary Inspectors' Association, urged that the power to take samples ought to be very much extended.

Mr. Blake (Home and Colonial Stores), Mr. A. J. Johnston, and Mr. Joseph Trantom (Liverpool Grocers' Association), and Mr. Alderman Dale (Cork Butter Exporters' Association) also spoke.

Mr. Long, in reply, said the deputation afforded a very adequate and eloquent answer to the charge which had been made in more than one quarter that the real object of the Bill was not to put an end to fraud and secure honest trading, but was in one way or another to assist particular industries, agricultural or otherwise. The real influence which had driven the Bill on and made it necessary for the Government to deal with the question had been the sincere conviction that the law was at present insufficient to secure honest trading. Several of the speakers

had stated that they were engaged in the margarine trade, and had been so from its commencement; and therefore they were not at all likely to recommend anything to harass the margarine trade or to destroy it by unfair legislation. (Hear, hear). He was glad to find that they approved of the framework and general scheme of the Sale of Food and Drugs Bill and were anxious to see it placed upon the statute-book, but he warned them strongly against imperilling the chances of the Bill by pressing forward too many amendments. It was remarkable, when the tendency of public opinion and of Parliament was in the direction of extending the powers of local authorities, that there should be so much evidence of a desire for increased centralization, as shown by their demand for the creation of a central staff of inspectors. It would, however, be most undesirable if in the fervour of their desire to secure better administration, and to put an end to dishonest trading, they were to do anything which would be calculated to weaken local administration or to lessen that public spirit which led local authorities in many parts of the country to look after their local affairs with great ability, energy and success. The fact that in some parts of the country they had not come up to the standard reached in others would not justify the Government in doing anything which would be likely to strike a fatal blow at the efficacy of local administration. What they should seek to obtain was such powers as would enable them to bring up all over the country the standard of local administration to the high point to which it had been brought in some parts of the country; in other words, to induce all the local authorities to be equally vigilant and equally determined in their administration of the law with regard to fraudulent adulteration. He believed the powers in the Bill would enable them to effect a material change in those parts of the country where the most glaring inconsistencies were to be found. He was surprised at the almost unlimited inspection of trading premises which had been recommended; but in regard to the penalties there seemed to be a general unanimity of opinion that they were not sufficiently heavy. There would appear to be difficulties in the way of substituting in the matter of penalties the assistant for the master in cases where the former knowingly sold margarine as butter; but whilst he recognised the force of what they had said, he was old-fashioned enough to think that the master ought to be master and to take the responsibility of the servant whom he had appointed. In conclusion he urged them to remember that there was a strong body in the House of Commons and outside of it who, while entirely opposed to dishonest trading, were extremely apprehensive of injury being done to a trade which was of importance to the great mass of the community. Whatever might be thought of the reasonableness of their views, it would be idle to disregard their opinions or to ignore them in any estimate of what it was possible to do. He hoped they would support the Government in putting a practical measure on the statute book, which would tend to rapidly diminish and in the end to put a stop altogether to the frauds of which they complained. (Cheers).

Mr. Kearley, in proposing a hearty vote of thanks to Mr. Long for the kind and courteous way in which he had received them, said that the deputation would dissipate once for all the idea that the Bill was for the benefit of agriculture. He was perfectly confident that when the Bill had passed through Committee they would have a measure which would be a permanent advantage to the honest trader and a permanent menace to the swindler. (Hear, hear).

The deputation then withdrew.

DEPUTATION TO MR. CHAMBERLAIN.

On March 30th, Mr. Chamberlain, M.P., received a deputation at Highbury from the Birmingham Grocers' Association with reference to the Bill for amending the law relating to the sale of food and drugs. The deputa-

tion urged that the Bill should be amended so as to provide—(1) that all invoices should constitute a warranty as to the quality of the goods to which they referred; (2) that grocers' assistants should be held liable for their actions behind the counter; (3) that prosecutions for butter mixtures should be taken under the Margarine Act rather than the Food and Drugs Act; (4) that it should be compulsory to make up margarine into a special shape so as to distinguish it from butter; and (5) that Mr. Chamberlain would use his influence to obtain an official pronouncement from the Local Government Board as to the effect on the human system of boracic acid, and that, pending this, prosecutions for its use within reasonable limits as a food preservative should be suspended. The deputation consisted of Councillor Jarvis (chairman of the general purposes committee of the Grocers' Federation of Great Britain), Mr. Beck (solicitor), Mr. J. Newey (president of the Birmingham Association), Mr. J. L. Instone, Mr. G. Bolton, and Mr. J. F. Edwards (secretary).

Mr. Chamberlain, replying to Mr. Jarvis, said he understood that there was a guarantee under the Margarine Act, but not under the old Food and Drugs Act, and it placed the responsibility upon the person who sold the article. Referring to the proposal to make the *employé* responsible for his own negligence, instead of the employer, Mr. Chamberlain said that was rather against precedent. An employer was responsible for the *employé*, under the Employers' Liability Act. He asked the deputation if they had placed their views before Mr. Long, as representing that department of the Government?

Mr. Jarvis, on behalf of the deputation, replied that the Federation of Grocers' Associations had interviewed Mr. Long, but the Birmingham Association, which the present deputation represented, had not. The interview took place before the Bill was introduced to the House, and they were rather hopeful from Mr. Long's reply that the points put before him would be included in the Bill, but to their disappointment they were not.

Mr. Chamberlain said—I am very much obliged to you for stating so clearly the points you wish me to consider. They have been stated with great lucidity and force. I imagine you come to me, not so much at any rate as a member of the Government, as the member for Birmingham ("Yes") and therefore representing you in Parliament. It is in that capacity that I am here to receive you, because this Bill is not in my department. It is in that of my friend and colleague, Mr. Walter Long, and it is to him I should be inclined to direct you if you wished anything in the nature of a positive reply. It is not for me to give you a reply, which can only come from the Minister in charge of the Bill. What I can do is to say that I thoroughly appreciate the arguments which you have used. I gather that your objections are confined mainly to four points. In the first place you desire that responsibility for adulteration should fall upon persons who really are morally liable and mainly upon the vendor of the adulterated article. In the second place I understand there are circumstances which in your experience make it necessary, in your opinion, that where an employer can clearly show that he has taken every precaution, and, notwithstanding that, against his orders the offence has been committed by his assistant, the assistant should be made personally liable. In the third place, I understand you desire that where prosecutions take place in the case of adulterated butter or margarine they should take place under the Act which was made for the purpose of protecting the public, and it should not be open to inspectors to bring persons up under either one of the two Acts—that is, the Margarine or the Food and Drugs Act. Lastly, I understand that difficulty which has been presented to me in regard to the use of boracic acid, which I hope will be speedily settled by Somerset house. In that case the whole difficulty would be removed. I understand that all these points are not errors of commission

in the Bill, but that they are in your opinion errors of omission. That is to say, it is not of the Bill you complain, it is not of what is in the Bill, but of what is not in it, and which you wish to see in it. I am very glad to hear from the representatives of your honourable and useful trade that the trade are not in any sense opposed to the principle of the Bill. ("No"). But you desire consumers should be protected against any kind of adulteration and fraud, and in fact are anxious to co-operate with the Government in securing it. That is what I understand from you, and all I can say in conclusion is that I will take care that your views shall be fully represented to my colleagues, Mr. Long especially, and when I go back after Easter I hope he will see his way to meet your views.

The deputation thanked Mr. Chamberlain for his courteous reception, and withdrew.

FISH AS BRAIN FOOD.

THE popular notion that fish is a brain food, rich in phosphorus, is a myth—a pleasant conception with no physiological basis to rest upon. There is less phosphorus in fish than in beef or wheat, and that food which is best for the body is best for the brain. The origin of the conception is attributed to the German scientist, Prof. Moleschott, who forty years ago wrote this epigrammatic expression: "Without phosphorus, no thought." The great Agassiz, in an address in favour of a fish commission, with other considerations used the same idea, and urged that because of the intellectual activity of our people fish culture was demanded. When asked what gave him this idea, he replied: "Dumas, the French chemist, once suggested to me that fish contained considerable phosphorus, and might on that account be especially good for food; and you know the old saying, 'without phosphorus no thought'—I simply put the two together."

Afterwards Mark Twain, by his famous joke in the *Galaxy* advised a method of its practical application that travelled around the world and burst the empty bubble:

"Young Author—Yes, Agassiz does recommend authors to eat fish, because the phosphorus in it makes brains. So far you are correct. But I cannot help you to a decision about the amount you need to eat, at least, with certainty. If the specimen composition you send us is about your fair, usual average, I should judge that perhaps a couple of whales would be all you would want for the present. Not the largest kind, but simply good, middling-sized whales."

CHESTNUTS.

THE consuls in France report that Indian corn as an article of diet among the French peasants is being replaced by the chestnut. The report says:

"The poor people during the fall and winter, often make two meals daily from chestnuts. The ordinary way of cooking them is to remove the outside shell and blanch them; then a wet cloth is placed in an earthen pot, which is almost filled with raw chestnuts; they are then covered with a second wet cloth, and put on the fire to steam. They are eaten with salt or milk. Hot steamed chestnuts are carried around the city streets in baskets or pails; the majority of the working people, who usually have no fire early in the morning, eat them for their first breakfast, with or without milk. Physicians state that as an article of food chestnuts are wholesome, hearty, nutritious, and fattening. These nuts are often used as a vegetable, and are exceedingly popular, being found on the table of the well-to-do and wealthy. They are served not only boiled, but roasted, steamed, puréed and as dressing for poultry and meats."

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Food and Sanitation.

SATURDAY, APRIL 15, 1899.

SPECIAL NOTICE.

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THE TRADE IN ROTTEN TINNED FOODS.

THE disgusting disclosures which culminated at Thames Police Court, on April 6th, when Joseph Fells was sentenced to four months hard labour for the systematic vending of rotten tinned foods, ought to have at least one good result, viz., to warn the public against buying or eating any tinned foods not prepared by firms of high

reputation. The need for this is obvious, especially in articles like tinned salmon which has claimed two more victims by poisoning within the past few days. When this food is put up by small packers possessing insufficient canning facilities, it often happens that the catch of salmon is larger than can be dealt with immediately. Rather than waste the fish, a proportionately smaller time is given to the cooking of each batch, the result being that the spores are not sterilised. The fish looks all right when the can is opened, but it may teem with ptomaine poisons. It is the same with meats. Of course, firms like Armour's, Cudahy's, and Crosse and Blackwell who have enormous facilities and the best appliances and scientific aid know the grave importance of adequate cooking, and their goods can be relied upon as safe and of fine quality. It is the hole and corner concoctors of table delicacies, of penny to sixpenny extracts of meat, &c., from whom the public requires protection.

It is very lamentable that although a large trade is done in rotten tinned milk sold to confectioners, no Sanitary Authority has hitherto been able to pounce on any confectioner in the act of using the rotten condensed milk. We hope it will not be long before some of the bakers and confectioners using rotten eggs and rotten tinned milk are brought to justice, and that they will receive a more severe punishment than the man Fells is now enduring. It is nauseating to think that sweets and fancy pastry should be made with the filth vended by Fells and others, but such is the fact. Without the bakers, confectioners, and hole-and-corner "delicatessen" manufacturers who incorporate the filth into food and sell it to the public, creatures like Fells would find their occupation gone. A more rigorous inspection of bakers' and confectioners' premises, and of the materials they use, is, therefore, very much needed.

MARGARINE AS BUTTER.

At the Leeds Police Court, Arthur John Stubbs, trading as Stubbs & Sons, provision merchants, of 30, West-street, Leeds, was summoned for selling one pound of butter on February 17th, which the City Analyst certified to contain 76 per cent. of foreign fat. Mr. Jolliffe, Deputy Town Clerk, prosecuted. A fine of £3 and costs was imposed or fourteen days' imprisonment. Inspector Walker proved the case.

At Radcliffe Police Court on April 3rd, Malachi Coleman, 199, Church Street, Radcliffe, grocer, was fined £5 and costs for selling butter which was adulterated with upwards of 20 per cent. of water; and Frank Quinn, 61, Bury New Road, Besses-o'-th'-Barn, was fined £5 for exposing for sale margarine which was not labelled according to the Act.

At Solihull Police Court on April 4th, Walter Thomas Haden, grocer, of Station Road, Knowle, was summoned for selling butter adulterated with 75 per cent. of foreign fat. Mr. Cross appeared for the prosecution on behalf of the County Council, and Mr. A. J. O'Connor defended.—The defendant pleaded that his assistant, who served the butter during his absence, had made a mistake.—A fine of 5s. and costs was imposed, the magistrates expressing the opinion that the offence was committed through carelessness.

At Leeds, on April 6th, Austin Owen, 24, Cromwell Street, Leeds, was fined 20s. and costs for selling to Mr. Walker, the Foods and Drugs Inspector, a pound of butter

which contained 68 per cent. of foreign fat.—Hannah Wetherell, of 7, Lemon Street, York Street, Leeds, pleaded guilty to exposing for sale by retail, margarine, without having attached to it a label, "Margarine" in 1½ in. capital letters. She was fined 25s. Inspector Walker prosecuted.

At Blackburn on April 7th, Whittle Kay, grocer, Park-road, was summoned for exposing margarine for sale without being labelled, and further for serving it in a wrapper not properly marked. A second case arose out of the first, and the defending solicitor created a laugh by asking whether it was likely his client would cut his own throat with a piece of butter paper. The Bench said the public must be protected, and fined defendant £6 and costs.

POISONED BY TINNED SALMON.

GEORGE PERRY, an invalided soldier, aged 25, and his father, residing at Upper Weston, Bath, ate a tin of salmon for dinner on April 5th, and both became seriously ill. The son died on April 6th, after 24 hours suffering.

FOR ADULTERATING OLIVE OIL.

THERE is lamentation in Pondicherry, the headquarters of French India, because of the serious falling away in the ground-nut trade. It is not our ground-nut that is in question—the arnut, pignut, or earth chestnut that grows in abundance throughout the North of England, and not least so in the parish of Ryton. It is the ground-nut or earth-pea (*Arachis hypogæa*), whose seed-pod has the peculiarity of ripening underground, furnishing a choice food stuff in many regions of Africa, and yielding the sweet oil used for adulterating the better class of olive oils.

DISEASED MEAT.

HENRY PULLEN, butcher, of 210, Devon-road, Bromley-by-Bow, was charged at Thames Police Court, with having in his possession diseased meat which he intended to sell as food.

It was stated that in consequence of certain information the Poplar medical officer and sanitary inspector went to defendant and told him he had a diseased cow on his premises. Pullen opened his ice room, when four quarters which clearly presented signs of tuberculosis, and a liver in a disgraceful condition, were found.

After other evidence had been given Mr. Dickinson said he saw the carcase, which was simply disgusting. It was a very bad case, and defendant would be fined £30 and £7 7s. costs. We do not understand such misplaced leniency. This offence clearly deserved imprisonment.

ANALYSTS AT VARIANCE.

At Worcester City Police Court, Robert Jackson, farmer, Tolladine Farm, was summoned for selling adulterated milk on March 7th. Mr. S. Southall (Town Clerk) attended to support the case on behalf of the Health Committee, and Mr. A. J. Beauchamp defended, pleading not guilty. Mr. Sheppard, Assistant Sanitary Inspector, stated that on the day named he purchased from defendant's son in Northfield-street, a pint of new milk, which he treated in the usual way for analysis. Mr. Pacy, Sanitary Inspector, who prosecuted in these cases, spoke of handing the milk to the Public Analyst. Mr. Duncan stated that from his analysis he found that the milk contained 3.77 of added water. In reply to Mr. Beauchamp witness said he received five or six other samples the same day. The label came off that sample, but witness had no doubt that the analysis he had made was of the sample

handed him by the Sanitary Inspector. Mr. Beauchamp, for the defence, urged that there was absolutely no added water in the milk. Defendant was called, and said that he had sold milk in Worcester for 11 years without any complaint. So far as he was aware no water was added to the milk. In reply to Mr. Southall, defendant said that he handed the milk to Mr. Beauchamp on March 18th. Defendant's son also gave evidence. Mr. Raymond Ross, a public analyst of six years and a half experience, said that he was of opinion that the milk was perfectly genuine. There were 2.9 of fat, and 9.11 of solids not fat, as compared with Mr. Duncan's 3.06 and 8.18. The milk was slightly decomposed, but not sufficiently so to interfere with the analysis. He could not explain why the analysis did not agree, except by the supposition that the substances treated were different. In reply to Mr. Southall, witness gave a description of his methods, which appeared to be satisfactory. Mr. George Embrey, Public Analyst for the city and county of Gloucester, who possesses many qualifications and has held his position for 15 years, said that he had analysed a sample of the milk in question, and had come to the same conclusion as Mr. Ross. The witness spoke in a rather disparaging manner of certain methods adopted by Mr. Duncan. At this point Mr. Southall asked that a sample of the milk be sent to Somerset House for analysis. The Chairman pointed out that the bottle had not been sealed properly, and that anyone could break the seal and replace it without detection. Mr. Beauchamp said that in that case he would take objection on the ground that the requirements of the Act had not been complied with. The Bench decided to send the two samples analysed and the third which had not been touched to Somerset House, and adjourned the case for a month for that purpose. The bottles were sealed in open Court by the Chief Constable.

REVELATIONS OF THE PUTRID TINNED FOOD TRADE.

At the Thames Police Court, on April 6th, Joseph Fells and Vernon Fells, of Sage Street, Shadwell, appeared before Mr. Dickinson to answer adjourned summonses for being in possession of a quantity of tinned food which was unfit for the food of man.

Mr. George Hay Young prosecuted, and Mr. Hawtin, barrister, defended.

The prosecution was instituted at the instance of the Limehouse District Board of Works, and altogether 3,917 tins of condensed milk, lobster, salmon, pineapple, and peaches were seized by direction of Dr. Thomas, medical officer of health, on the 2nd February last. The whole stock was brought to this court and condemned, Mr. J. Fells making no objection to that course being adopted. Mr. J. Fells said the tins of condensed milk were intended for pigs' food. In one case of 336 tins of condensed milk no less than 231 were bad. In a shed were 11 boxes containing 792 tins condensed milk, all of which were bad. In another box, holding 72 tins of Honey Brand, 59 were blown. There were also 501 tins of bad sardines in a similar state.

For the defence, Mr. A. Straker, of Fieldgate-street, stated that he had been in the habit of buying "Honey Brand" condensed milk from the defendants, and in all the cases had only a few bad tins.—By Mr. Young: He could not produce any receipts as they were business transactions. He gave evidence for Mr. J. Fells at the sessions. He paid the defendants 9s. 6d. per case. He had a case of beef from the defendants, which turned out very well.

Mr. Robinson, grocer, of Renwick-street, Caledonian-road, gave similar evidence, and added that his customers were satisfied with the "Honey Brand" milk he had from the defendants at 9s. 6d. a case.—By Mr. Young: He had complained of some of the milk being thick.

Mr. F. G. Kennedy, canned goods dealer, of 3, Idol-lane,

City, deposed that he had known Mr. J. Fells for ten years, and had always considered him a straight-forward man of business.

Rev. Mr. M'Kay, late pastor of Zion Chapel, White-chapel-road, gave similar evidence.

By way of rebutting evidence, Mr. Young called Fred. W. Palmer, manager to Mrs. Fulkes, of Stainsby-road, Poplar, who said he gave Mr. Harper, the defendant's traveller, an order for cases of lobster. These were delivered and paid for on the 7th January last. When the witness opened the cases he discovered 12 blown tins, and on opening the tins not blown he found them absolutely bad. Mr. J. Fells afterwards promised to send fresh tins or refund the money, but that had not been done.—By Mr. Hawtin.—The salmon was slightly cheaper than usual.

Dr. Alexander, medical officer of Poplar, said on the 1st of March the last witness came to him to destroy as trade refuse 185 tins of lobster. He opened 83 large and 83 small tins, all of which were bad. He gave six unopened tins to Dr. Thomas. He found only one tin which was really good. All the tins had evidence of old labels underneath, and there were prick holes in the sides, in addition to the one on the top.

David Thompson, of 4, Portland-street, under-manager to Messrs. Moir and Sons, preserved provision manufacturers, also gave evidence as to the condition of the tins.

Mr. Dickinson, in giving his decision, said it was admitted that all the tins were unfit for the food of man, and the only question he had to decide was whether they were deposited for sale and for the food of man. He believed that at least a quantity of the tins seized were sent out for sale, for the defendants could only mention the sale of 30 tins to a farmer for the purpose of being given to pigs for food. The defendant J. Fells' attention had previously been called to the danger of the business he carried on, but it had been proved that he sold milk at 1s. 6d. a case to a baker named Harris. There was no evidence of a bona fide mistake having been made, and in short the evidence had not left a particle of doubt of the guilt of Joseph Fells. It seemed incredible that anyone could be found to carry on such a nefarious trade, and it must be stamped out. That defendant would be sentenced to four months' hard labour, and he would have to pay 20 guineas costs to the prosecutor. Vernon Fells, his son, who was young, would be discharged with a serious caution.

MILK TRADE DODGES IN LANCASHIRE.

FROM the remarks of the magistrate in the following case we expected a substantial penalty would have been inflicted, instead of 10s. and costs. If the magistrate believes that this penalty will deter vendors from selling "milk and water" he must be very credulous indeed:—

At Dukinfield on April 6th, a farmer and milk dealer named Robert Gatley was summoned, under the Sale of Food and Drugs Act, for refusing to supply a sample of milk to the County Council Inspector when requested to do so.—Mr. Heathcote, solicitor, defended.—Inspector Lea stated that he saw the defendant delivering milk to houses in Russell-street. He went up to the defendant's milk float, and asked to be supplied with a pint of milk. Defendant said he could not have any, and he asked him how it was, and for reply he pointed to a can in the cart and said "Do you see that?" Witness looked at the can, and saw upon it a label "milk and water." He asked him what price he charged for his milk and water, and he replied 3d. per quart. He then asked him for a pint of milk and water, and he replied, "I shall not serve you." Witness then looked into the can and saw that it was then one-third full of liquid. He offered defendant 1½d., and informed him he was an inspector, and that he demanded to be served with a pint of milk and water from the can which he had marked milk and water in order to submit it to the public analyst for the purpose of analysis. Defendant still refused to serve him, notwithstanding that

he informed him he was liable to a heavy penalty, and he would be summoned. Defendant replied, "You can summon me then, you can't have all your own road." Subsequently defendant wanted him to have a pint from one of the smaller cans, but he required it from the can labelled milk and water. He eventually drove away without selling him a sample.—Cross-examined by Mr. Heathcote: I have taken a sample from the defendant on a previous occasion, and the report was that it was pure. I had not had any complaints about him before. I did not lose my temper. I did not call him an old fraud, but very likely I should not have been very far off if I had done. He offered me a pint of milk out of a small can, and I refused to have it. The County Council did not instruct me to take samples of milk and water. It is my duty to prevent fraud. This might have been skimmed milk and water, which is different to milk and water. I believe he was trying a fraud upon his customers.—Mr. Heathcote: He was delivering milk at Mrs. Pickup's, wasn't he?—Witness: I don't know the person's name.—Didn't he offer to supply you with a pint, and you said "Take it to your customer," and he replied, "She wants a quart?" No.—Didn't you follow him to Mrs. Pickup's and ask her what she had bought it for, and didn't she say "I have bought it for what it is?" Yes.—Isn't that how that the defendant tendered you a sample, and you would not have it? He refused to give me a sample of the milk and water which I demanded.—Mr. Heathcote, for the defence, said his client was an old man, and well known in the district for a great many years, and his instructions were that he offered the Inspector a pint of milk, and he would not have it, he insisting upon having milk and water, which was not food within the meaning of the Act. Although the milk can was marked milk and water, the contents were pure milk.—The Magistrates' Clerk asked the Inspector whether he was prepared to argue that milk and water came within the Food and Drugs Act.—Inspector Lea said it included every article used for food as drink. He contended that milk and water could not be water.—Mr. Heathcote said neither could it be milk, which the Inspector demanded. He could not find a single case where a man had been brought up for refusing to sell a sample of milk and water or an Inspector taking a sample of milk and water.—Alderman Beeley: You would not argue that this milk and water was not intended for food.—Mr. Heathcote said it was of the nature and quality demanded.—Alderman Beeley: But he did not get what he asked for. The Inspector was appointed to protect the public from fraudulent persons selling as food that which may be actionable according to the Food and Drugs Act. The practice which prevails amongst milk sellers of labelling their cans milk and water, I can only describe as a clear attempt to evade the Act, and if the public were wise, they would not buy milk from any man who used such a label. The whole thing is simply to rob poor children, who are chiefly fed upon milk. A more dastardly thing I cannot imagine upon the part of an Englishman, than to rob the poor children of the real value of food which the parents think they are buying. No mother with the least sense would buy milk and water, and I have no sympathy whatever with it.—Defendant was then fined 10s. and costs.

THE DRUG ADULTERATION MUDDLE.

At Otley Police Court on April 7, Walter T. Moore, a chemist, of Yeadon, was summoned by Mr. Henry Gamble, inspector under the Food and Drugs Act, for two offences against the provisions of that Act. Mr. A. Neill appeared for the defendant. The prosecutor said that on the 23rd February he purchased from the defendant 2oz. of Gregory powder, which on analysis was found to contain 68 per cent. of carbonate of magnesium and 32 per cent. of rhubarb and ginger, whereas the British Pharmacopoeia said that Gregory powder should be compounded in such a manner as to contain 67 per cent. of calcined mag-

nesia and 33 per cent of rhubarb and ginger. In this case the defendant used carbonate of magnesium instead of calcined magnesia.—In reply to Mr. Neill, the prosecutor said that this was the first summons he had taken out against any one with respect to the sale of Gregory powder. He knew nothing about the two kinds of magnesium except that one was cheaper than the other, the calcined magnesia costing 4d. and the carbonate of magnesium 3d.—Mr. Neill submitted that it was extremely harsh that a small country chemist should have been selected to be the first person to be prosecuted. There was a reason why the carbonate of magnesium was substituted for calcined magnesia. The latter caked, and lost its properties, whereas in its unburned and virgin state carbonate of magnesium did not cake, and retained its properties. It was not a question of an extra penny profit, but the carbonate of magnesium was better for the customer.—The defendant and Dr. Usher gave evidence on this point, and said that in their opinion carbonate of magnesium was the better of the two.—On hearing this the Chairman dismissed the case.—The second charge was that Moore had sold to the inspector 4oz. of sal volatile which on analysis was found to have a specific gravity of only 3.8859 instead of from 0.888 to 0.893, as required by the British Pharmacopœia. The sample contained only two-thirds of the amount of the active ingredients of ammonia and ammonium carbonate present in the article prepared according to the British Pharmacopœia, and that deficiency represented a corresponding reduction in the remedial value of the preparation.—Mr. Neill, for the defence, submitted that as sal volatile was volatile, every time the stopper was removed evaporation took place, and in that way the specific gravity had been reduced in the sample sold to the inspector. Nothing had been added or taken away by the defendant.—Evidence of this was given, and the magistrates dismissed the summons.

SOMERSET HOUSE AND GROUND GINGER.

ENCOURAGING THE SALE OF PARTIALLY EXTRACTED GINGER.

WHEN will magistrates learn that Somerset House is not a Court of Appeal in adulteration, but only a body constituted to express an opinion, and an ignorant and necessarily worthless one at that? The incompetence of the gin and beer tasters has for years been the laughing-stock of real analysts, but the blunderers go on, and magistrates, unaware of their incapacity in food analysis, still look upon Somerset House certificates as sacred, because they come from a Government Department, and this despite the enormous loss the Government chemists' ignorance caused the revenue by the denatured snuff frauds.

To those who know the ginger trade the following case needs no comment. It furnishes a sharp object-lesson of the very thorny path the analyst who strives to do his duty to the public has to tread, and how pretentious ignorance in Government Departments can at any moment render his efforts inutile.

At Barnsley West Riding Police Court, on April 10, Ernest Broadbent, shopkeeper, Thurlstone, appeared to an adjourned summons under the Food and Drugs Act, at the instance of Mr. John Henry Bundy, the local inspector, charging him with having sold a quantity of ground ginger which contained not more than 50 per cent. of genuine ground ginger, and of not less than 50 per cent. of ground ginger which was exhausted of its pungent principles, on the 30th of November last. Mr. Wardell, of the West Riding solicitor's office, appeared to prosecute, and Mr. Reid (of the firm of Messrs. S. Learoyd and Co., Huddersfield), defended.

The Magistrates' Clerk said the case came before the Court on the 9th of January last, and as a result of argument the Bench decided that the third sample of the ground ginger should be sent to Somerset House laboratory. The

case was adjourned pending the return of the certificate from Somerset House. The certificate was read as follows:—"Government Laboratory, Clement's Inn Passage, Strand, London, W.C.—The sample of ground ginger marked No. 421, and referred to in your letter of the 23rd ult., was received here on the following day, securely sealed. We hereby certify that we have analysed the ginger, and declare the results of our analysis to be as follows: Soluble in 90 per cent. alcohol, 4.56 per cent.; soluble in ether volatile oil, 0.43 per cent.; fixed oil and resin, 4.43 per cent.; soluble in alcohol after ether, 1.08 per cent.; soluble in water after alcohol and ether, 3.70 per cent.; total ash, 2.33 per cent.; ash soluble in water, 1.03 per cent.; loss on drying sample (at 212 deg. F.), 12.70 per cent. The microscopic and physical characters of the sample indicate that it belongs to one of the lower grade descriptions of commercial ginger. The amounts soluble in alcohol and ether respectively are equal to that found in genuine ginger of this class, and afford no evidence that the sample has been exhausted with alcohol. The proportions of matter soluble in water, and of ash soluble in water, are lower than we have found in unwashed ginger, but as these amounts are easily reduced by the ordinary washing of the ginger, which usually occurs before grinding, they do not, in our opinion, afford evidence that the sample in question is a mixture of genuine ground ginger and ginger exhausted of its pungent principles. The microscopic and analytic results are consistent with the conclusion that the sample in question is a 'washed' Japan, or similar low grade ginger."

Mr. Wardell said the sample was sent to Somerset House, but he protested against it at the time, on the ground of irregular procedure. On that occasion Mr. Reid took the opportunity to make serious statements which were reported, to the effect that there was a league of public analysts, who would not appear against one another. It was a serious statement, and he should call expert evidence to rebutt that allegation, which was not true. He contended that Mr. Allen's certificate was taken as evidence, and now evidence would be called to justify Mr. Allen's certificate. They were asked, upon the certificate from Somerset House, to withdraw from the case, but on the other hand he should call expert evidence to prove that Mr. Allen's certificate was correct. Mr. Wardell said if he was satisfied that the defendant was really the defendant, he might not go to the present length, but the real defendants being a firm of spice merchants, Messrs. Peek Bros. and Winch, Limited, London, they should be called upon to supply genuine ginger. In the interests of the public, it was a case which should not be dropped, and the public should be protected. The country authority, as responsible for the public, were in earnest about the case, and evidence would be given by some of the most eminent analysts and chemists in the world. Mr. Wardell dealt with the analysis from Somerset House, and contended that practically it was a corroboration of the analysis of Mr. Allen. He explained that the cleaning of ginger was carried out by either friction or washing, but if the washing was done on an immoderate scale it would result in the ginger being deprived of its pungent properties. He suggested that it had become a practice by some firms to wash the ginger, and the extracted properties became profitable.

Alfred Henry Allen, public analyst for the West Riding, was called, and stated that he was a member of the Society of Analysts, and president in 1887-8. He denied that there was any practice or league amongst analysts with regard to appearing against each other. The statements were absolutely false. He had had considerable experience with regard to ground ginger. Taking the Somerset House certificate, as far as the figures went, he considered it corroborated him. He expressed his results in terms of so much exhausted ginger. This sample was a particularly bad case. He knew Japan ginger, and it might be that, by negligence in washing, it would be robbed of its goodness.

Dr. Bernard Dyer, B.Sc. of London University, presi-

dent of the Public Analysts' Society, and public analyst for Leicester, Rutland, Wilts, and the city of Truro, said he considered the certificate from Somerset House supported Mr. Allen's certificate so far as the figures were concerned.—Cross-examined, he did not agree with the deductions expressed in the Somerset House certificate. He thought they were cautious, and gave the sample the benefit of the doubt. He did consider the figures condemned the sample.

Mr. Otto Hehner, public analyst for West Sussex and Isle of Wight, and Mr. Ed. Bevan, public analyst for Middlesex, agreed that the figures in the Somerset House certificate corroborated Mr. Allen's certificate.

For the defence, Mr. Reid submitted that the case must be dismissed. The proceedings taken were the same as in other cases, and the public analysts were appointed at Somerset House, and they must take their certificate.

The Bench dismissed the case. The Chairman added that they considered the case was a proper one to be brought forward.

Mr. Reid asked for costs, but the Bench made no order.

CURIOUS FOOD.

It was *Punch* who pathetically complained of the monotony of eternal beef and mutton, and prayed for the invention of a new meat. Indeed, the English bill of fare is an exceedingly limited one, and many besides *Punch* have sometimes wished that a new meat could be invented. But we do not take advantage of all the dainties which Nature offers; it is not necessary to invent a new meat, but simply to acquire courage to taste and eat hitherto uneaten animals, birds, and reptiles.

Cows, sheep, pigs, various fowls, game, and fish furnish all the items of the ordinary bill of fares; indeed, the food of the vast majority of the people simply consists of beef and mutton, with occasional changes to pork and fish. There are, however, many other animals which, prejudice apart, would furnish just as nourishing and tasty and more novel food. Horseflesh is regarded with popular horror, but the dislike is one simply founded on prejudice. No doubt the flesh of old, worn-out nags is neither very palatable nor nourishing. But a horse which, from its birth, is intended for food, and fed and cared for like an ox, supplies excellent meat. It is much finer in flavour than beef or mutton, and much more expensive.

In Paris the restaurants include horse beef in their daily menus. Similarly, donkey flesh is very good eating, providing it is young. A donkey more than eight months old is not edible. In taste it is said to much resemble a turkey, though very much finer in flavour. Two shillings a lb. is the price for donkey meat, but a big demand would, of course, reduce this to a reasonable figure; the same remark applies to horseflesh. In Arabia the horse is eaten and considered a great delicacy.

Custom and prejudice alone prevent many really tasty and common animals being used for food. Of all animals, the pig, with its filthy, grovelling habits and food seems the most unlikely to be appreciated by human beings. Yet the pig, whose name is a synonym for all that is low and bestial, is eaten without repugnance—nay, with relish. Charles Lamb wrote a prose epic in praise of roast pork. A dainty lady will eat and enjoy roast pork, but she would scream and shudder at the very idea of eating a roast rat. Yet the rat is a vegetarian, and most cleanly in its habits, while nobody can claim that for the pig. Rat pie is a great delicacy, and is a dish of which the Rev. J. G. Wood, the celebrated naturalist, was extremely fond.

During the siege of Paris, 1871, the starving inhabitants ate up all the animals in the Zoo. Elephant and lion steaks and the flesh of other wild animals were eaten, and, though it was a case of Hobson's choice—that

or none at all—the Parisians found that they were very palatable. Even now the gourmets of Paris delight in the flesh of camels, lions, and elephants. Camel's flesh is brought from Algeria, and is said to be remarkably like beef. It is as tender as veal, and the Arabs regard it as very nutritious. The hump of a camel is the titbit of the beast, and when plump and fat is a dainty indeed.

In the South of France snakes are sold, ready for cooking, under the name of hedge eels. Frank Buckland, the famous naturalist, stated that he once made a hearty meal off a boa-constrictor, its flesh being exceedingly white and firm, and not unlike veal in taste. Fried or stewed rattlesnake is very like eel, which people eat without a qualm of stomach or conscience.

Lion's flesh is said to be very good eating, but tiger is tough and sinewy. Nevertheless, the latter is eaten in India, as there is a superstition that it imparts strength and cunning to the eater. Bear's flesh is a great favourite in Germany, and smoked tongues and hams are considered great delicacies. On account of the rarity of Bruin, they are expensive. Sausage—so dear to the Teutonic heart and stomach—is also made from bear liver; 25lb. of sausage can be made from a single liver.

There appears to be considerable diversity of opinion as to the merits of elephant's flesh. In India and Africa it is a favourite dish with the natives, but a European who has travelled much in Africa says:—"I have tasted elephant over and over again. It is more like soft leather and glue than anything I can compare it to." Another traveller, however, declares that he cannot imagine how an animal so coarse and heavy can produce such delicate and tender flesh. All authorities, however, agree in commending elephant's foot. Even the traveller quoted above, who compared elephant's flesh to leather and glue, admits that "baked elephant's foot is a dish fit for a king." When an elephant is shot in Africa the flesh is cut into strips and dried; it is then called "biltong." The elephant's foot is cut off from the knee-joint, and a hole about three feet deep is dug in the earth and the sides of it baked hard with burning wood. Most of these faggots are then removed, and the elephant's foot placed in the hole. It is filled up with earth, tightly paced down, and a blazing fire built on top, which is kept burning for three hours. Thus cooked, the flesh is like a jelly, and can be eaten with a spoon. It is the greatest delicacy which can be given to a Kaffir.

Rhinoceros meat is something between pork and beef, and is not to be despised when no other flesh is to be obtained. In America a 'possum is esteemed a great delicacy. Kept in a barrel for a week and fed on sweet potatoes, and, when killed, stuffed and roasted, it forms a most delicate dish, resembling chicken in taste. A negro will spend all the night catching a 'possum for his Sunday dinner.

Monkey meat is also good eating. Dr. Wallace, the well-known scientist, once breakfasted on monkey. "It was by no means bad," he wrote, "being something like rabbit." He also stated that: "Although the habits of the jaguar are filthy in the extreme, jaguar steaks are beautifully white, and remarkably like veal in taste." In the same way ducks, though feeding on grubs, worms, frogs, and mud, form, as everyone will admit, a delicious dish. Kangaroo steaks are splendid, and our Australian cousins assert that kangaroo soup is the finest in the world, and infinitely superior to ox-tail. Travellers are also unanimous in declaring that the flesh of the alligator and crocodile is extremely tender, white, and delightful to the palate. Seal flesh, though perfectly black, is matchless for flavour, tenderness, digestibility, and for heat-giving power.

Squirrels are extensively eaten in some parts of rural England. Skewered nightingales is the great dish of Florence, and those who have conquered their sentiments and eaten the little songsters are loud in their praises. In Florida a stew of robins, jays, and bluebirds forms a most savoury and delicate dish. But the barbarous English-

man, as our French neighbour styles us, could not knowingly eat such little birds with enjoyment. And the same may be said with regard to the other dainties enumerated above. But if you did not know the names of the dishes, you could eat and enjoy rat pie, stewed cat, boiled horse beef, fried snails or any of the above dainties. As it is, the imagination is the autocrat of the stomach, and people will only eat what custom has made familiar. We cannot imagine how people can eat frogs or snails, nor can foreigners imagine how we eat what we do. A Turk shudders at the sight of an Englishman eating an oyster. Diet is simply a matter of habit and custom, and a man is a bundle of habits in his feeding arrangements, as well as in his thoughts, actions, and business. There is, indeed, no earthly reason—beyond that of custom—why man should not add some of the above dainties to his bill of fare.

SUGGESTED AMENDMENTS TO THE NEW FOOD AND DRUGS BILL.

THE Shoreditch Vestry decided on April 4th, to present the following suggestions to the President of the Board of Agriculture and the members of Parliament for the Borough (Mr. James Stuart and Mr. John Lowles) with a view to the amendment of the Food and Drugs Bill now before Parliament:

1. That in clause 9 of the Bill the person whose name appears on a vehicle or receptacle ought in all cases to be regarded as the vendor and be liable in cases of default to summary conviction.
2. That clause 11 should provide for it being plainly stated on each tin of condensed milk that the milk is not suitable for rearing infants upon, and that the same should be legibly labelled as separated or skimmed milk.
3. That clause 17 should be amended to read: that the service of the summons should be sufficient notice of the intention of the purchaser to take proceedings, and this ought to be made very clear.
4. That clause 8 should be deleted. This clause provides that it should be unlawful and punishable to make, sell, or offer for sale, or import any margarine which contains more than 10 per cent. of butter-fat.
5. That the following words shall be added to clause 17: "That any invoice used under this section shall fully describe the nature of the article sold."

The following notice has been sent to all the provincial societies by the Metropolitan Dairymen's Society:—

I beg to inform you that the Government Bill to amend the Law relating to the Sale of Food and Drugs has been considered by the Committee of the Metropolitan Dairymen's Society, and herein are the proposals for amendment which they suggest, viz.:—

Part I., Clause 1, Section 7.—That the provisions of this clause be inserted to apply to home-grown products.

Part I., Clause 4.—That the milk trade be represented at the inquiry.

Part I., Clause 5.—That clause 5 of the Margarine Act, 1887, be incorporated in this clause so as to extend its provisions to milk, which is as follows, viz.:—"Where an employer is charged with an offence against this Act, he shall be entitled, upon information duly laid to him, to have any other person whom he charges as the actual offender brought before the court at the time appointed for hearing the charge, and if, after the commission of the offence has been proved, the employer proves to the satisfaction of the court that he had used due diligence to enforce the execution of this Act, and that such other person shall be summarily convicted of such offence, and the employer shall be exempt from any penalty."

Part II., Clause 14.—That a time limit be provided between each offence by inserting the words "committed within one year of the previous offence."

Part II., Clause 17.—To read "Any warranty or invoice shall be available as a defence to any proceeding

under the Sale of Food and Drugs Acts, provided the defendant has, &c."

Also, that owing to the perishable nature of milk the sample shall be analysed—in summer within 24 hours, and in winter within 48 hours of being taken, to insure the milk being sweet, when analysed.

THE CHEMISTRY OF SAUSAGES.

THE composition of the sausage is not only complex but it is often obscure. In this country the preparation of this (as it should be) useful article of food is confined to the employment of minced beef and pork. The only exception, says *The Lancet*, probably is the so-called "black pudding" which is made with pig's blood and perhaps some heart and kidney. Abroad, however, the sausage is compounded of a much wider range of substances. These include brains, liver, and horseflesh. The last substance is generally considered repugnant, while of course it is fraudulent to sell sausages as beef or pork containing horseflesh. Occasionally, however, sausages do not contain meat at all but only bread tinged with red oxide of iron and mixed with a varying proportion of fat. The remarkable feature of horseflesh is the high proportion of glycogen which it contains, and this fact enables the presence of horseflesh to be detected with some amount of certainty. The test which depends on a colour reaction with iodine has recently been more carefully studied and with more satisfactory results, so that the presence of 5 per cent. of horseflesh in sausages can be detected. At present there is no legal provision for a standard in regard to the composition of sausages, but clearly there ought to be. Limitations should be laid down as to the amount of bread used, as to the actual proportion of meat substances present, and as to the colouring matters added to give an attractive appearance of fresh meat. Sausages are extremely liable to undergo decomposition and become poisonous owing to the elaboration of toxic substances during the putrefactive process. Bad or rancid fat is very liable to alter the character of a sausage for the worse. Thus in some instances the use of bad or rancid lard, has rendered the sausage after a time quite phosphorescent, an appearance which indicates, of course, an undesirable change. The smoked sausage is a much safer article of diet than the unsmoked sausage, since the curing process preserves the meat substances against decomposition by reason of the empyreumatic bodies present in the wood smoke which is used for this purpose.

AMERICAN CORN AT THE PARIS EXHIBITION.

ONE of the prominent American exhibits at the Paris Exhibition next year will be Indian corn. The Europeans have been giving maize to their horses and cattle for many years, and recently they have begun to eat it themselves—as an experiment—but the consumption is small. When maize begins to be appreciated as a food by the Europeans it will be a great day for the American farmer. The exports of that cereal will vastly increase and the price will rise.

A man from Kansas has this to say about corn and the Exhibition:

"We are going to show the world what corn is and what it can do. Those Europeans don't know what a grand thing it is. Why, when they see our exhibit at Paris it'll not only boom corn, but it'll boom the whole United States for produc'n' it. Commissioner Peck is with us, and we'll see that the display of corn in that wicked French city'll be an eye-opener."

"Congress has only appropriated 75,000 dols. for the display of all American agricultural products, but it'll have to do better'n that at the next session. Still, we're not depending on Congress alone. The Legislatures of Kansas, Nebraska, Illinois, Indiana, Iowa, and Missouri are all going to make appropriations. If they appropriate, as they could well afford to, one-fourth of 1 per cent. of

the value of their annual corn crop it would amount to more than half a million dollars.

"We're goin' to have a corn palace at Paris in which there will be everything useful that can be made from corn—corn meal, hominy, starch, corn flour, sugar, candies, syrup, oil soap, a substitute for rubber and cellulose from the corn pith.

"There'll be an Indian corn kitchen and restaurant, where you can get hoe cake, corn cakes, corn dodgers, johnny cake, corn pudding, popcorn, mush, succotash, and fritters. Won't the Americans appreciate that though, and won't it make the Europeans hungry for more!

"We're not going to be stingy either. Samples of corn meal, flour and hominy will be given away, with directions printed in foreign languages telling how to cook the good things you can make from corn.

"No, I guess we won't show 'em how to use it for fuel. We'll take along a plenty, but not enough to burn. But it's no joke, corn does make a mighty nice fire. I was in South Dakota just before I came east, and the farmers were using it in their cooking and heating stoves. It's too cheap to sell, and coal is too dear to buy. There's very little ashes or dirt about using corn, and it makes a powerful hot fire. That's the only trouble; it's so hot that it burns the stoves out in a little while, but it's a great fuel, a great product altogether, and I'm glad I live where it grows."

MR. STRACHEY, M.P., ON IMPERFECTIONS IN THE NEW FOOD AND DRUGS ACT.

SPEAKING to his Somerset constituents of the North-East Somerset Farmers' Club at Chew Magna, on April 8, Mr. Edward Strachey, M.P., stated, as the Chairman of the Committee of the Somerset County Council that had under their consideration the Sale of Food and Drugs Bill, now before Parliament, he, with the Committee, had gone through the Bill and had not found much to interfere with except clause 11. They had therefore recommended that the provisions of this clause should be so amended that it related to condensed separated, or skimmed milk, so that the type in which the contents of the receptacle is stated should be in letters of half an inch long, and further that the penalty imposed by this clause should be increased from not exceeding £2 to not exceeding £10. The committee expressed their unanimous regret that the Bill did not contain as strong provisions as they would desire to effectively protect the consumer against fraud by the addition of colouring matter or preservatives prejudicial to health. This he considered was the real essence of the Bill for them to consider that evening. Firstly from the point of the consumer the addition of preservatives, and the colouring of margarine to imitate butter he considered was a downright fraud on the consumer. The preservatives allowed milk to be kept far longer than it ought to be kept, and there was one powerful drug known that would restore milk gone wrong to its original flavour. Many of them had doubtless heard of another preservative formalin. This was the refuse of whisky, the crude fusel oil which was considered so harmful in the raw material. He was not to be easily convinced that arrested decomposition of food stuffs by means of preservatives could be considered healthy. Digestion was decomposition, and what arrests one must also hinder the other. As to the colouring of separated and condensed milk, he had set down an amendment to the Bill to prohibit it. There was no doubt colouring matter in margarine was only added to defraud the consumer. Separated condensed milk was sold in London especially. A short time since a deputation, not consisting of distressed agriculturists, but from Camberwell, waited on Mr. Walter Long to point out to him medical testimony that stated that 40 per cent. of the mortality amongst infants under one year old died from improper feeding with this separated condensed milk, which was about as suitable for them as chalk and water. Therefore he considered the consumer should not be allowed to be deceived in this matter

of condensed separated milk. As regards preservatives, the Council of the British Medical Association had passed an opinion that preservatives in food were prejudicial to health. He should do his best to fight in the interests of the consumer, so that he should not have condensed separated milk or margarine instead of butter. He considered the 10 per cent. limit of butter too high, and should like to see 5 or 6 per cent. substituted for the 10 per cent.

The meeting unanimously agreed to the following resolutions:—

"1. That while welcoming any measures which will encourage free trading and prevent fraud, this club is of opinion that the provisions of the Bill do not go far enough.

"2. That in the opinion of the members of this club the colouring matter of butter, cheese, milk, and margarine should be entirely prohibited.

"3. That the 10 per cent. allowance of butter fat is too high."

SOME ARDENT SPIRITS.

ALMOST every nation of the world uses and manufactures ardent spirits to satisfy the appetite of mankind. Here are a few of the drinkables which are made in various countries:—

Aqua Ardiente, made from the agave tree, in Spain.

Arrack, made from coarse sugar, in India.

Panwah Arrack, made from juice of palm, in East Indies.

Arraka, made from mare's milk, in Tartary.

Arriki, made from dates, in Egypt.

Arika, made from cow's milk, in Iceland.

Brandy, made from grapes, figs, &c., in Europe and America.

Frustring, made from sloes, in South of France.

Gin, made from barley and juniper, in Holland.

Gin, made from barley, in England.

Golewasser, made from barley and aniseed, in Dantzic.

Kirchwasser, made from cherry berries, in Switzerland.

Lau, made from rice, in Siam.

Maraschino, made from cherry berries, in Zara,

Curacao, made from oranges, in West Indies.

Plante, made from cactus, in Mexico.

Rakai, made from husks of grapes, in Dalmatia.

Rassolio, compounded, in Dantzic.

Seskis Kayavodka, made from fruit, in Scio.

Schowcho, made from rice, in China and Kamchatka.

Schowcho, made from rice, in China and Japan.

Rum, made from sugar cane, in West Indies and America.

Tuba, made from palm in Philippine Islands.

Whisky, made from molasses and grain, in Europe and America.

Woohah, made from herbs, in Africa.

Y-wer, made from the root of the turroot, in Sandwich Islands.

Yrostir, made from grapes, on the Rhine.

Yung, made from rice, in the East Indies.

This list does not comprise all the spirits distilled and consumed by different countries, a thousand or more of which come under the head of manufactured or compounded.

NORTHAMPTONSHIRE QUARTER SESSIONS AND INADEQUATE ADULTERATION FINES.

THE Chairman laid before the Court the resolution of the County Council respecting the small fines imposed by County Benches in respect to proved cases of adulteration. In one case it was calculated that the profit to the seller by the amount of adulteration disclosed equalled £536 per year. The fine was £3. Seven other cases were reported,

in which the fines practically bore no proportion at all to the amount of profit derived.—The Court considered the matter in camera, and passed the following resolution:—"That the Court of Quarter Sessions desire to point out to the several Benches throughout the county that the offence of adulteration does not appear to them to have been dealt with with sufficient severity; and direct that the resolution of the County Council, together with the annexed returns be circulated among them."

REMEDIAL FOODS.

SAID an eminent physician: "If housewives would make a study of the medicinal properties of the vegetables, fruits, &c., which they serve, and act upon the knowledge thus gained, there would be far less need to summon the physician on every slight indisposition of some member of the family. Of course, this only applies to ailments in the incipient form, when, by prompt action, disease may be warded off. The ounce of prevention in this, as in other cases, is far better than the pound of cure. When disease has fastened upon the system the only proper course is to employ the best physician procurable."

Those inclined to or suffering from rheumatic troubles should use celery, all tart fruits, especially lemons and sour oranges.

One troubled with nervous disorders will be greatly benefited by using onions, turnips and celery. Onions are said to be almost the best nervine known. Nothing will so quickly relieve nervous prostration and tone up a worn-out system.

For kidney troubles, use grapes, spinach, and common dandelion, making a tea of the roots of the two latter, and taking tablespoonful doses several times a day, when the plants are not procurable for a relish. Butter-milk as a beverage is also beneficial. For disorders of the liver use tomatoes, onions, lemons, and salt.

INSOMNIA

is often cured by the use of either lettuce or onions. Use all kinds of fresh, ripe fruits to purify the blood and tone up the system. Blackberries and raspberries are tonic, and useful in all forms of diarrhoea. Bananas are an excellent food for those suffering from that disease in chronic form. Figs—a most valuable remedy for those suffering with cancer—are used in the same way.

Garlic, olives, onions, peanuts, and tomatoes promote digestion. The beaten yolk of an egg, with milk enough added to make it palatable, will be beneficial in cases of jaundice. Take morning and night. Also the beaten yolk with sugar is good to clear and strengthen the voice, and beaten with lemon-juice and sugar it will relieve hoarseness.

Elderberries are said to be a specific for dropsy. Spinach and onions will relieve those suffering with gravel. Carrots are good for asthmatic troubles. Turnips, onions and salt for scurvy. Those who are troubled with diabetes should use foods devoid of sugar and starch. Peanuts are especially recommended for corpulent diabetes.

A chapter might be written on lemons, the free use of which often saves a good big doctors bill. They are a sovereign remedy for cold, if taken in time. When a severe cold is felt coming on the patient should take a hot lemonade, made by squeezing and cutting one lemon into a half-pint of boiling water. Add a very little sugar, to make it palatable, drink, and go to bed, covering up warmly to induce a gentle perspiration. For feverish thirst in sickness, biliousness, low fevers, rheumatism, liver troubles, etc., they are almost invaluable.

For constipation, Dr. C. Lyman, in "The Voice," says: "Two simple procedures will usually restore normal action to the bowels. Drink a pint of cold water before breakfast, in little sips, taking at least twenty minutes. Chew the food to a cream, so thoroughly that it cannot get into solid form again, but will blend with the digestive juices, par-

particularly the bile, and remain fluid." Coffee, tea, sugar, spices, pastry, and hot biscuits are to be avoided.

THE VALUE OF APPLES AS FOOD.

THE apple is one of the most wholesome and valuable of foods for the reason that it keeps so well in temperate climates and presents such a variety of flavors, suiting itself to man's needs by ripening at different seasons and supplying a considerable amount of nourishment in the most easily digestible form. The nutritive value of the apple, says *Good Health*, is about fourteen per cent. Its value consists chiefly in the amount of carbohydrates and vegetable acids it contains. The apple contains also a large amount of phosphorus, which fact has led to the supposition that it is particularly valuable as a brain food. But the value of any food is certainly not to be measured by the amount of phosphorus it contains. Pure phosphorus would be a poison, and even dilute phosphorus is in the highest degree unwholesome. The best foods are those that nourish the whole body, and not those that contain elements similar to those found in any one particular part of the body.

The old Scandinavians believed that the gods subsisted wholly upon apples, and that it was through the peculiar properties communicated by this queen of fruits that they acquired the wisdom which they imparted to men.

The acids of apples are exceedingly useful through their stimulating influence upon the kidneys, whereby poisons are removed from the body, and the blood and tissues purified. The acids of apples are all highly useful as a means of disinfecting the stomach, since the ordinary germs that grow in the stomach, producing biliousness, headache, and other troubles, will not grow in fruit-juice or fruit-pulp.

A ripe apple is digested in about an hour or an hour and a half, whereas a much longer time is required for the digestion of flesh foods and many cereal foods.

Apples should be eaten at meal-time, not alone at the beginning or the close of the meal, but, if one chooses, throughout the meal, mingling the fruit with bread and other cereal preparations, and also with nut products.

In the case of a person suffering from biliousness an excellent plan is to adopt an exclusive diet of apples for a day or two, or even longer. One could live upon the exclusive diet of apples for a week without any injury, and in some cases decided benefit may be derived from the use of such a special dietary.

CORRESPONDENCE.

STERILISED MILK.

To the Editor of FOOD AND SANITATION.

SIR,—Your article on the above topic, in your issue of April 1st, ought to receive the thoughtful consideration of all who are interested in questions of life and health. There is no doubt in the minds of those well able to exercise a judgment that the destruction of bacteria, simply because they are living organisms, may be a very serious mistake! The balance of Nature in these matters is planned by One who is Omniscient, as well as the "Upholder of all things." It has been proved that the extermination of birds creates a surplus of grubs and insects, and the same principle doubtless applies here.

What we want is that the milk from pure "Stock" shall reach the consumer without contamination or adulteration. This, undoubtedly, has been secured in the patent process that can now be seen in operation in the city. Any of your readers who would like to have particulars, and to inspect the process, which keeps milk sweet for weeks, and even months, I shall be pleased to hear from.—Yours truly,

T. KYFFIN FREEMAN,

Fellow of the Royal Statistical Society.

Blairgowrie, Whitehall Park, N.,

7th April, 1899.

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Food and Sanitation.

SATURDAY, APRIL 22, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

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4, AVE MARIA-LANE,
LONDON, E.C.

FLOUR AND BREAD.

EVER since man reached that stage of civilisation at which he began to keep a record of his actions there has been a constant struggle between honesty and roguery. The two principles of good and evil are, it need scarcely be mentioned, practically illustrated at every moment in all parts of the world and by all sorts and conditions of men. Every profession, trade and occupation has its different forms of dishonesty, and the particular one I wish to call

attention to here is, no doubt, the cause of the question "How much bread should a sack of flour produce?" being so frequently asked during the past few months. An operative baker is judged, more or less, says *The Field*, not only by the quality of bread he produces, but by the quantity of bread he is able to obtain from a given quantity of flour; and whether a baker is in charge of the bakehouse or not, he should be able to make a calculation as to the number of loaves of bread each consignment of flour produces. Unfortunately, very few persons who bake bread consider this important point, namely, the yield of bread from a given quantity of flour, or some of the roguery that has been much in vogue during the past three years would have been at once detected by reason of the falling off in the bread yield. In approaching this subject it must be remembered that bakers who have wheaten flour to convert into bread use yeast to act on it; salt and water and the process of baking are details that entail no anxiety; the whole trouble centres in the due "decomposition" of the flour previous to baking. When the yeast is mixed with the flour, the baker is sowing a crop, for yeast, being a plant, is bound to share in the vicissitudes of plant life, and it is therefore most important that the "ground" should be properly prepared, and its component parts known. In other words, it is most important for bakers to have a sack of pure flour, and not one that contains some foreign matter, added to cheapen, or, as some millers have had the audacity to claim, a little maize to improve the bread, for, unless the baker obtains a pure and uniform article from his miller, it is impossible for him to obtain the full benefit from the flour supplied. Now, if we consider the matter from the honest miller's point of view, we find that every miller to make a profit and a living during these sharp competing times, besides attending to the good working of his mill machinery and the discipline of his men, must make as good flour as possible out of as small a quantity of wheat as possible, under conditions existing in regard to class, condition, and quality of wheat, system of milling, and limits of machinery. The soundness, variety, condition, and the quality of wheat, determine the quality and quantity of flour. Good wheat, well milled, will produce good flour that should give at least 94 to 96 loaves to the sack of 280 lb.; while poor wheat, however well milled, and however favourable the conditions are in the bakehouse, will make at best only a fair flour, and a bread yield under 92, and more often 90, loaves to the sack of 280 lbs. of flour. How much bread should a sack of flour produce? My reply is, if manufactured in an English mill on the roller process, using about one-third English wheat and two-thirds foreign, the baker, if employing hand labour, should get 94 to 96 loaves of 4 lb. each from his ovens, but, should machinery be employed, there will be a slight decrease in the output of the bread. The writer recently visited a bakehouse in the provinces, and where the baker himself and his son did the kneading, 98 loaves of 4 lb. each were baked from 280 lb. of flour. The flour used was ordinary good baker's flour, milled in a country roller mill. On another occasion the writer visited a bakery, and saw some good-looking flour that, however manipulated, would not give more than 88 loaves of 4 lb. each per sack. On the flour being tested it was found that it contained at least 10 per cent. of added maize flour, which had been so skilfully manipulated and mixed, that the greatest difficulty was experienced in detecting the proportion of maize added. The best Hungarian flour will produce with careful manipulation as much as 110 loaves of 4 lb. each from 280 lb. of flour, and the writer has, when testing a sample lot, got as many as 114 loaves from a sack.

MARGARINE AS BUTTER.

At Tottenham, Charles Harvey, 1, Sherboro-road, South Tottenham, was summoned by Mr. A. L. Bridge for selling butter adulterated with 25 per cent. of foreign fat, on the 23rd February.—Mr. Bridge's assistant deposed to visiting the defendant's premises on the date named and

asking for half-a-pound of one shilling butter, for which he tendered 6d.—Defendant said he purchased the butter from a man named Charles, provision dealer, and sold it exactly as he bought.—Mr. Charles said that he sold the compound in all good faith, he having purchased it from the Irish Creamery Company.—Defendant was fined 5s. and costs, together with the costs of the analyst's fee, in default 7 days' imprisonment.

At Belfast, on April 10th, David M'Master, Inspector under the Food and Drugs Act, summoned Thomas Collins, 105, Durham Street, for having exposed margarine for sale without being labelled, and for delivering same in a plain paper. Mr. A. J. Lewis prosecuted on behalf of the Corporation. Their Worships imposed a fine of 40s. and costs in each case.

At Clerkenwell, on April 12th, Frederick William Brushett, of 12, Leather Lane, for selling butter, on the 28th February, containing 80 per cent. of foreign fat, was fined 23s., with 12s. 6d. costs.

William Richard Nelson, of 30, Cross Street, Saffron Hill, for selling butter containing 25 per cent. of foreign fat, was cast in costs, 12s. 6d.

At Marlborough Street, on April 17, John Hill, of 7, Binstead Street, Oxford Street, was summoned for selling butter adulterated with the addition of 78 per cent. of foreign fat.—Half a pound of "shilling butter" was purchased from the Defendant, and upon analysis it was found to be adulterated with 78 per cent. of added fat.—The Defendant said the article was sold by mistake as tenpenny butter, and pure butter could not be sold at that price, though it could be at 1s. a pound. He had been in business twenty years, and though Vestry officials had purchased many samples of his goods on previous occasions, they were always found to be pure.—Mr. De Rutzen said the offence was a bad one, as a person who asked for butter and got an article containing 78 per cent. of something else was absolutely defrauded. The Defendant would have to pay a fine of £15, with 12s. 6d. costs.

WATER AT SPIRIT PRICES.

On April 15th, Edward Duckfield, landlord of the Lion Inn, Abergwili, was charged by Inspector Henry Evans, St. Clear's, with selling adulterated whiskey on the 7th, ult., the liquor being $27\frac{1}{4}$ degrees under proof. Defendant was fined 22s., including costs. John Morgan Meredith, Emlyn Arms, Llanarthney, sold whiskey $44\frac{1}{2}$ degrees under proof. Mr. James John, solicitor, Carmarthen, who defended, said defendant was in the habit of keeping a very much diluted bottle of whiskey for his own use, a publican being very often called upon to drink with his customers. On this occasion, by an oversight, the officer was served from the wrong bottle. The Bench smiled and fined defendant £2 2s. inclusive.

At Shrewsbury, on April 15th, W. Henry Maddox, of the Theatre Vaults, was charged with selling whisky which was diluted with water below the legal standard. Mr. F. W. Williams appeared for the defence.—A lad of twelve, named Frank Wallader, deposed that on March 11 he went to the defendant's vaults for half a pint of whisky, for which he paid 1s. 2d. He was not told by Miss Moddox, who served him, that the whisky was adulterated, nor did he see any notice in the vaults to that effect.—Robert Croxton, inspector under the Food and Drugs Act, said he sent the last witness for the whisky, and followed him into the vaults. He told Miss Maddox it was purchased to be tested, and gave her a part of it. Mr. Maddox was in the vaults, and said there was a notice that the whisky was diluted, but witness saw none. The sample was sent to Dr. Bostock Hill, of Birmingham, the borough analyst, and his certificate showed that it was 36.97 below proof, which was 15 degrees below the legal standard.—The defendant said he had practically nothing to do with the vaults; he had let it to his sister for years.—Mr. Williams said the whisky was reduced by Miss Moddox in a hurry and without her using the hydrometer, as was usually the case.—A fine of £5, including costs, was inflicted, the licence not to be endorsed.

IMPORTANT CASE OF BORACIC ACID IN BUTTER.

At Birmingham on April 11, Samuel Hilton, 87, Shakespeare-road, was summoned for selling butter containing boracic acid. Mr. Jacques, who appeared for the defendant, said there was another case of an exactly similar kind to the one before them against a defendant named Bennett. He had an application to make. In view of the fact that the question as to what quantity of preservative could be used with safety was in doubt—a certain quantity, beyond doubt, was absolutely necessary in dairy produce—he asked that the case should be adjourned. As late as last week a deputation waited upon Mr. Chamberlain, asking him to use his influence in getting a standard fixed, and Mr. Chamberlain intimated the hope that in the course of a little time Somerset House would deal with the matter and decide upon a fixed standard. Having in view the difference of opinion of medical experts on the matter, the case might be adjourned for a short time to see if the subject was dealt with by Somerset House. Mr. Hiley, who prosecuted, opposed the adjournment. He said that if they were to wait until the Government passed the Food Bill they might have to wait until October. With regard to the amount of boracic acid present in the sample in question there was no conflict on the point. It was sixty-three grains to the pound. The Magistrates' Clerk: I have never heard it seriously contended that that would not be too much. Mr. Jacques: Fifty grains is the quantity which has been allowed in Birmingham. I have a host of medical opinions upon the question of the effects of boracic acid. Some doctors even go so far as to say that it is not sufficiently used. The Magistrates' Clerk: We have heard all that. Where in the opinion of the magistrates the quantity is excessive they have held it is deleterious to health, and fines have been imposed. The only ground for adjournment is that the quantity would not be sufficient to be injurious. Mr. Jacques: That is not my contention. The application for the adjournment was refused, and Mr. Hiley proceeded to open the case, explaining that the proceedings were instituted under Section 6 of the Act. There were two summonses against the defendant, one for selling butter containing boracic acid, and the other for exposing margarine for sale which was not properly labelled. Dr. Hill gave evidence as to his analysis, which revealed the presence of sixty-three grains to the pound of boracic acid, and in reply to Mr. Hiley said such a quantity was certainly injurious as well as unnecessary as a preservative. It was in excess, even if it were necessary, because it was not all in solution. Mr. Jacques: You know there is a great difference of opinion on this subject? On every subject.—Do you know that Dr. Iliffe, coroner for North Warwickshire, says that borax is not sufficiently used, having regard to its very safe and very reliable qualities as an antiseptic agent? I should not be inclined to accept that. I should not attach any importance to it.—Why? Because I do not think he has gone into the question sufficiently as to its effect on the human system.—Should you pay any attention to what Dr. Oliver Pemberton said? No, not on that particular point. If it was a matter of surgery I should. The Magistrates' Clerk: I assume that those persons agree that the percentage would not be injurious? It is useless to put a general question as to whether a doctor agrees that boracic acid is a good preservative. We all know it is. If you are going to ask Dr. Hill anything, let it be as to some analyst of eminence who states that sixty-three grains to the pound is not injurious. Mr. Jacques: I go beyond that. I say they speak of it that it may be used almost in any quantity, and that it is absolutely not injurious. The Magistrates' Clerk: The Magistrates have already decided that. Mr. Jacques said that his object in asking the questions was to show that there was a very great difference of opinion amongst the most eminent medical men, and having in view the fact that it was a question which was being dealt with in a Bill now before Parliament, he suggested that the magistrates should suspend their judgment. The Magistrates'

Clerk said a Bill might be introduced by anybody and knocked on the head. It was not passed at present. Mr. Jacques: No; but there is evidence to satisfy you that the question is a very important one, and that it is likely to be dealt with at an early date. The Magistrates' Clerk: You may take it that the magistrates have already decided in a number of cases that an excessive quantity of boracic acid is injurious, and they have convicted. It is useless to go beyond their decision unless you can give some evidence that this quantity is not excessive. Mr. Jacques: I am afraid I cannot do that. The question is what is excessive? The Magistrates' Clerk: Is sixty-three grains to the pound excessive? Dr. Hill: Certainly. Mr. Williams (to Dr. Hill): What per centage is necessary to be a sufficient preservative of the butter? Dr. Hill: None at all. The majority of samples of butter which I analyse contain no borax.—If it were to be used as a preservative, what quantity do you think would be necessary? I should think apologetics for it would consider twenty grains ample. The Magistrates' Clerk: The quantity depends on a number of circumstances. If it is a quantity only used once it might not be excessive, but if used four or five times a day it is excessive. It depends on the number of times at which food is taken which contains boracic acid. Some people do not take butter more than once a day, but the poorer classes take it four or five times, and everything depends as to the injury to the system upon the frequency with which the borax is taken into it. Mr. Jacques: Is it a fact that nearly all the bacon and hams imported contain boracic acid? Dr. Hill: A great deal of them. Mr. Jacques: Even jams and preserves have it in them? Dr. Hill: Oh, yes; nothing escapes. That makes it so much the worse, because a person takes it at every meal. Mr. Jacques: You have a strong opinion on the subject? Dr. Hill: Yes; because I go by positive results obtained, and not by the negative opinions of people.—Do you know that Dr. Bond, the eminent authority of Westminster, has certified: "Occasionally I have given ten grains every four hours, but the usual dose is thirty grains a day. That I have continued for months without any deleterious effects on the health"? Dr. Bond is speaking of cases of illness which he has treated temporarily with a certain object. He does not advocate that we should eat boracic acid in everything we swallow, but he refers to its being taken when people are ill.—If you prescribe it as a medical remedy, it would be different from taking it in food? Certainly. Mr. Jacques said he would not pursue the matter any further. On behalf of the defendant he wished to say that this was not a case of cheating. The defendant purchased the butter in the ordinary course of business. If he purchased jam or ham, the preservative would be found there all the same. As a matter of fact, one had only to go into a grocer's shop, and the first article he touched would contain the preservative. What had been done had been done with the proper motive of preserving the article and keeping it fit for human food. At the present time the vast bulk of the provisions and dairy produce consumed in this country was imported, and had to come a very long distance, therefore it was important that some preservative should be used. As time went on, he believed, more and more preservatives would be employed. The magistrates reserved their decision in the case until they had heard the second summons, which charged the defendant with failing to conform with the regulations of the Act by exposing a parcel of margarine which had not a label attached to it. Inspector Jones said that when he went into the shop in connection with the last case he saw a lump of something on the counter which he took to be margarine. It was not labelled, and he asked to be supplied with half a pound. The shopman remarked to him, "That is margarine." Witness reminded him that there was no label on it. The assistant said he had forgotten to put the label upon it. The assistant told him that the margarine was sold at 6d. per lb. Mr. Jacques: Is it possible for any person to buy this margarine and mistake it for butter? Witness: I should doubt if it was. Defendant said the butter was kept on a different counter some distance away from the

margarine. Mr. Hiley pointed out that the defendant had been three times previously convicted. He was now fined 40s. and costs in each case.—Percy Bennett, 13, Anderton-street, was summoned for selling butter containing 1·2 per cent. of boracic acid, equal to eighty-four grains to the pound. Mr. Jacques, who defended, said his client would plead guilty after the decision in the last case. There was no previous conviction against defendant. A fine of 20s. and costs was imposed.

TINNED COFFEE.

At East Dereham, Friday, Eliza Ostler, grocer and draper, of North Elmham, was charged with selling adulterated coffee on March 7. Defendant pleaded not guilty, and was represented by Mr. J. C. Chittock, of Norwich. Superintendent Thomas Chambers, said he visited defendant's shop on the day in question and asked for 8 oz. of coffee. Defendant said she had not any loose, and then supplied witness with a half-pound canister. Witness asked Defendant the price, and he paid 6d. for it; and then informed her that he had purchased the coffee for the purpose of analysis by the Public Analyst (Mr. Sutton, Norwich). Witness asked her if he should divide it, and, defendant replying in the affirmative, he divided the contents of the canister into three parts. One part witness handed to defendant, another part he retained, and the third part he forwarded to Mr. Sutton. Subsequently witness received a certificate from Mr. Sutton declaring that the sample contained 6 per cent. of coffee and 94 per cent. of chicory. The certificate was produced, and the Clerk was about to read some observations made by the Analyst at the foot of the certificate, when Mr. Chittock, interposing, objected to the observations being read, as they were not evidence. In answer to Mr. Chittock, the superintendent said he did not recollect hearing defendant say, "I don't understand the trade terms, but I presume you mean a mixture of coffee and chicory," neither did he remember the word chicory being used in any way. If it was made use of he felt confident he would have remembered it. Defendant did not say, "I have another mixture of a better quality which I sell at 8d. per ½ lb. He read the label on the canister, which was "Coffee and Chicory" (coffee being in bold type and chicory in smaller). He did not know that pure coffee was retailed at 1s. 8d. per lb., but he believed that was about the value. Addressing the Bench, Mr. Chittock said the case presented by Superintendent Chambers was a very short one. The defence must be necessarily longer unless their worships had already come to the conclusion that there was no case to answer. The Bench wished to hear the defence, and, continuing, Mr. Chittock entered into a lengthy argument, quoting many cases as decided by the Queen's Bench, upholding the legality of the sale, and maintaining as his chief point of defence that as the mixture contained 6 per cent. of coffee (the percentage he did not admit, but accepted, as it answered his purpose of defence) no offence had been committed by the defendant. The Bench dismissed the case. The Chairman said Messrs. Taylor Bros., Limited, Brick Lane and Wentworth Street, London, ought to have their attention called to the fact that the label on the canister bore, in bold print, the word coffee, and in much less easily discernible type the word chicory, and considering the percentages contained respectively of these two ingredients, the Bench were of opinion that the labelling should have been vice versa.

Arthur Bogle and Ernest Bogle, provision dealers, Barker Street, were summoned for selling coffee containing 12 per cent. of chicory.—Mr. Jacques, who defended, said that defendants purchased genuine coffee, and it was invoiced as such. On the invoice were also printed the following words: "The purity of every article guaranteed." Mr. Hiley agreed that that would probably be a warranty at law, and he was prepared to withdraw the summons on payment of costs.—The summons was therefore withdrawn.

IMPORTANT SPIRIT ADULTERATION CASE.

At Highgate, on April 14th, before Mr. John Glover and Mr. Alfred Reynolds, William Pendred Applebee, Wine and Spirit Merchant, Archway Road, Highgate, was charged with selling to the prejudice of the purchaser a certain article of food to wit, Brandy, which was 27·5 below or under proof.

A. Liddall Bridge, Inspector of Weights and Measures, said, I bought the Brandy and a label was on the bottle, Quality C about 25° U.P.

Mr. Elliot, barrister, who defended said the whole gist of the case was as to the definition of the word "about" and said he had searched vainly for a case on the point or even for a definition germane to the word *about*, the nearest he could find was a case in Stroud's Dictionary of Law under the head, About, and this was defined as more or less. The case was an ordinary commercial one, and he asked the magistrates to accept it, because even the prosecution would say the case was not a bad one. And further he had Mr. Granville Sharp there who found only 26·5, but as the third portion had been sent to Somerset House who found the strength to be 27 U.P., he would accept the latter, and asked the Bench to dismiss the case, Applebee having been in business 27 years and no complaint.

Mr. Bevan, County Analyst, said that he found the Brandy to be 27·5 U.P.

The Bench retired and upon returning said they had decided to inflict a penalty, £1 and costs.

Mr. Elliott asked for a stay of execution so that the question of appeal might have attention.

Mr. Bridge said this depended upon his applying for warrant of distress and he would not apply for some time.

Mr. Elliott who had conducted the case with great ability and spirit said he was obliged.

BEER ADULTERATION.

At Lambeth, on April 17th, Henry Gordon, of the Criterion Publichouse, Shakespeare-road, Herne-hill, was summoned by the Excise for diluting beer. Mr. Dennis appeared in support of the summons; and Mr. H. I. Sydney defended. It was alleged that two samples of ale, which was taken at the defendant's house in January last, were found upon analysis at Somerset House to be diluted. For the defence it was said that at the time the samples were taken the defendant was ill with influenza, and entrusted the cellar work to his daughter. That lady was called and stated that, in addition to the "finings," she put some waste into the ale. Mr. F. A. Mead, an Excise officer, stated that on March 28, 1898, the defendant was fined £5 and costs for diluting beer. Mr. Hopkins regretted that one fine had not stopped such bad cellar work, and ordered the defendant to pay a penalty of £20 and 26s. costs.

DISEASED MEAT.

At Derby on April 17th, John Bancroft was summoned that on the 21st February he did expose for sale, at 30, Market Hall, thirty-five pieces of beef and one liver, which were unsound and diseased, and unfit for food. Mr. R. J. Fittall (from the Town Clerk's office) prosecuted, and Mr. Stone defended. Thomas Turner, assistant inspector of nuisances, said he was on duty in the Market Hall before the defendant's stall was open, and he saw some meat under a cloth. He at once went down to the Cattle Market for a searcher of flesh. When they were returning together they saw the defendant running toward the Market Hall. Witness ran after him, and on entering the hall saw the defendant in the act of covering up a desk with a cloth. On removing the cloth witness found three pieces of beef, and many others about the shop. While they were examining the meat, Bancroft said, "I do not know what you want with meat like this: it's all right,

only a bit chafed. It hung itself. I have not seen it before; my man brought it this morning." The meat was dark and flabby and full of venous blood, and was condemned by a magistrate. Traces of tuberculosis were plainly visible. William Wilkinson, chief inspector of nuisances, described the presence of tubercles in the meat. Dr. Howarth, medical officer of health for the borough, said that the meat was distinctly tubercular, the disease being probably general in the whole carcase, only one quarter of which the defendant had, the remainder not having been found. Apart from tuberculosis the meat was unfit for food. Arthur Chambers, searcher of flesh, having given evidence, the case for the prosecution concluded. The defendant said that on Sunday afternoon his man Aldridge went out to dress a beast, and he heard no more about it till the following Tuesday, when Aldridge told him he had fetched a quarter of the beast from Mr. Gilbert's farm. Witness told him he ought not to have done that until he had seen it, but the man told him it was good beef. Later on he heard that Mr. Turner had been looking at the beef, and he then hurried up to see what was the matter. The beef was certainly wrong, and ought not to have been exposed for sale, nor would it have been had he seen it. Mr. Stone called the attention of the Bench to the degree of the guilt of the defendant himself, and urged that a moderate fine would meet the case. Mr. Gilbert bought the cow from a respectable faamer near Shirley, and had it taken on to his farm, where it was milked and the milk disposed of. The cow was chained up, and there was no external evidence of disease, but during the night it strangled itself with the chains by which it was held, and was then stuck. On the Tuesday morning Aldridge, who had an order for some meat, went to Gilbert's and fetched a quarter of the beast without consulting the defendant. Witnesses were called in support of the defendant's version, and eventually the magistrates decided to convict. The Chairman said that the public must be protected against the sale of such meat. Had the defendant full knowledge of it the fine would have been much larger. He would be fined £15 and costs.

EXPOSING UNSOUND FRUIT FOR SALE.

A Question of Interest to Dealers.

At Liverpool on April 12th before the Stipendary, Mr. W. J. Stewart, Mary Anne Harrison was summoned for exposing thirty boxes of oranges for sale in the wholesale fruit market, Cazneau Street.

Mr. Alexander Wilson defended.

Inspector Bailey deposed to visiting the defendant's premises in the wholesale fruit market, on the 1st inst., and finding thirty boxes of oranges, twenty-nine of which were absolutely rotten.

Mr. Wilson said that this matter had been taken up by the fruit trade, and was one of importance. The question arose as to when the fruit ought to be seized and when it ought not. It was suggested that the dealer should have the opportunity of sorting out good fruit from the boxes before the fruit was seized, and the Corporation had provided a place for that purpose in the wholesale market.

In answer to Mr. Wilson, the inspector said the defendant had not asked permission to sort the fruit. This fruit was for sale to hawkers, and was not selected before leaving the market.

Mr. Wilson.—I suppose you know that even the best of fruit contains a percentage of damaged?

Inspector Bailey.—Not always. At certain periods of the year.

Mr. Stewart.—There appears to have been no possibility of selection in the 29 packages.

Inspector Robinson, who corroborated the evidence of the last witness, said that when there was a fair percentage of good oranges, the fruit was allowed to be selected.

A fine of £2 and costs was imposed.

MILK ADULTERATION.

The Employer's Liability.

MRS. MARY BEATTIE, cow-keeper, 40, Forth Street, Pollokshields, was accused at Glasgow, on April 12th, before Sheriff Fyfe, of having sold from a milk cart in Centre Street, through one of her servants, a pennyworth of sweet milk that was deficient in fat to the extent of 14 per cent. She pleaded not guilty. The sale was proved by two inspectors under the Food and Drugs Act.

For the defence, John Marks, the salesman, said that for some time before and after his encounter with the inspectors Mrs. Beattie was laid aside from business, seriously ill, and knew nothing of the matter whatever. How it happened was as follows:—He was making the rounds of his customers on the day in question and on reaching Centre Street he found he was running short of sweet milk. In order to enable him to complete his rounds he took some of the skim milk, which was nice and fresh, and put it in the sweet milk barrel. He did this entirely at his own hand, Mrs. Beattie knew nothing about it. He had never done such a thing before except once.

Mrs. Beattie said she had been in business for 25 years, and the quality of her milk had never been questioned before. She knew nothing of this offence till she got the summons.

Sheriff Fyfe said the respondent was responsible for the act of her servant, although she herself was not directly guilty. In the circumstances, however, he would impose a modified penalty of £3 including expenses.

THE STANDARD OF WATER IN BUTTER.

James Edward Stephenson, grocer, Euston Road, Morecambe, was summoned at Lancaster, on April 15th, for selling adulterated butter. He was defended on behalf of the wholesale firm interested by Mr. Whittaker, of Haslingden.—Mr. H. W. Wilson, who prosecuted, produced the certificate of the county analyst, Mr. Collingwood Williams, who certified that the butter contained 19.3 per cent. of water, 75.68 per cent. of butter fat, and 4.96 per cent. of curd mineral matter of which 3.5 per cent. was salt. When the summons was served the defendant produced the following warrant from the wholesale firm:—"The above invoiced butter is guaranteed to be perfectly pure, free from margarine or any foreign fat, and not to contain more than 18 per cent. of water." Mr. Wilson submitted that the defendant could not shelter behind this warranty if he allowed the police sergeant to leave the shop without producing it. The analyst's certificate stated that genuine pure butter should not contain more than 15 per cent. of water.—This observation was objected to by Mr. Whittaker, who said that, as a matter of fact, the question of fixing a standard was being relegated to a committee of authorities to be selected by the House of Commons. Prosecutions of this character were being dismissed all over the country for that very reason, while at Manchester all cases of butter adulteration, where there was less than 20 per cent. of water had been dismissed.—The Bench dismissed the case.

THE FOOD VALUE OF MUSHROOMS.

By E. H. GANE.

A GREAT deal has been said concerning the immense amount of valuable food which is daily going to waste in the shape of edible fungi. We have been told that in many parts of the world these vegetables form the staple articles of diet of the inhabitants. Our attention has been drawn to the natives of Patagonia and Terra del Fuego, who are said to be of gigantic stature and to exist principally on vegetable fungi, and to certain African tribes who value mushrooms so highly that one of them the *polyporus sacer*, is worshipped as a god. Chemists have assured us that mushrooms belong to the animal rather than

the vegetable kingdom, seeing that they possess a larger percentage of nitrogen than any other class of vegetable life. They are, we are told, essentially protein in composition, so much so, pound for pound, as butcher's meat. Two German chemists, Rollrausch and Ziegel stated, some years ago, as a result of chemical investigation, that mushrooms deserve to be placed with meat as sources of nitrogenous nutriment. One man in Thuringia is said by Dr. Gautier to have lived upon nothing but mushrooms for thirty years and to have died a centenarian. Comparison has even been made between mushrooms and other articles of food to the detriment of the latter. Thus, chemical analysis has shown mushrooms to contain from twenty to thirty-five per cent. of "protein" while bread only contains 8 per cent., oatmeal 13 per cent., potatoes 5 per cent., and barley meal 6 per cent. of "protein."

The poorer classes have been urged to substitute vegetable fungi for meat on the ground of their superior nutritive value and cheapness, and farmers have been told that they were neglecting their opportunities in not providing us with more "vegetable beefsteaks." The Department of Agriculture has taken up the subject, incited thereto by the publications of the various Mycological Clubs, and has issued bulletins showing how to cultivate mushrooms advantageously, and how to distinguish the edible from the poisonous varieties.

In spite of all these efforts, the use of the so-called "vegetable beefsteaks" has not made the progress which enthusiasts could have wished, and some doubting Thomases have even cast eyes of distrust on the results of various workers in this field.

As long ago as 1824 Dr. Kitchener stated in an English publication called "Cook's Oracle" that he did not believe that mushrooms were nutritious. Dr. Jonathan Pereira in his "Treatise on Food and Diet," published in 1843, said: "Mushrooms are difficult of digestion, and on certain constitutions act injuriously. Invalids, dyspeptics, and those with delicate stomachs, will act prudently in avoiding the use of this doubtful order of foods." Other writers have expressed similar opinions, not, however, based upon experimental work. Dr. Stromer, of Vienna, in 1887 came to the following conclusions as the result of a few experiments:

1. That mushrooms are of small nutritive value, being heavily charged with water, which reduces the amount of nutrient substances.
2. The albumin they contain is difficult of digestion.
3. They are as useful as ordinary vegetables, and being cheap deserve the attention of the poor.

Mycological students have refused to accept these conclusions, and have pointed with triumph to the results of chemical analysis, which showed a high carbon and nitrogen value in mushrooms of nearly all varieties. Chemical analysis, they said, cannot lie, and no one has ventured to dispute the results obtained.

It is only recently that we have found out that in physiological matters chemical analysis can be found to give results far from the truth. An almost exactly parallel example is found in what has been termed the "Brown Bread Delusion." A recent writer says:

"For centuries man has wanted white bread for his daily diet. His self-styled 'betters' have assured him that his daily brown or black loaf, whether of rye, oats, barley, peas, or whole wheat, was much more wholesome.

"About thirty years ago, that 'dangerous thing,' a 'little knowledge' of chemistry, demonstrated beyond all possibility of doubt the superiority of brown bread over white. Chemical analysis, the now infallible Pope of science, revealed that brown bread was far richer in nitrogen than white bread was, and nitrogen was considered the greatest desideratum of all food-stuffs.

"For some reason or other, however, every family, every class, every nation kept discarding brown or black bread and substituting white as fast as they could afford it. The brown loaf still lingers on the board, but rather after the manner of the mummy at the Egyptian feast, a tribute to a vanished ideal rather than an article of diet."

Science has again come to our aid and has now proved that although more nitrogen was present in brown bread, less of it actually got into the blood than from a similar weight of white bread; the white bread was not only more digestible, but more nutritious, weight for weight, than brown. The boasted excess of proteid matter was found to exist chiefly in the husk or skin of the wheat berry. This skin in composition is closely allied to woody fibre, and is absolutely insoluble in intestinal fluids.

An exactly similar condition of affairs is found in studying the food value of vegetable fungi. It is true that the per centage of nitrogenous and carbohydrate matter in the solid constituents of mushrooms is higher than in bread, potatoes or other vegetables, but as Dr. Lauder Brunton has said, if nitrogen were all we required, regardless of its form, we could grow fat on air. The nitrogen to be of any value must be present in an easily assimilated form, and modern methods of physiological research has shown that the nitrogen in mushrooms is very insoluble in digestive fluids. Prof. Mendell, of Yale, in a report to the American Physiological Association on the food value of vegetable fungi, says:

"Chemical analyses were combined with experiments in artificial digestion, and special attention was given to the amount available (digestible) proteid present. The latter was found not to be over three per cent. in fresh mushrooms, which shows that the prevailing idea of great nutritive value of mushrooms is not yet justified. They may be valuable as dietetic accessories, but they do not deserve the term "vegetable beefsteak." Their nitrogen is largely in the form of non-proteid bodies. The amount of fat, cholesterin, soluble carbohydrates, crude fibre, and inorganic substances contained in them corresponds in general with that found in other vegetables, such as peas, corn and potatoes."

The United States Department of Agriculture has also taken up this subject, and in Farmer's Bulletin, No. 79, publishes the results of an extended examination into the value of mushrooms as food. The following table shows the relative value of mushrooms and other articles of diet as ascertained by the Department's Chemists:—

	Parts in 100 parts of Fresh Substances.				
	Total Water.	Nitro-gen.	Non. Nit.	Pro-tein.	Carbo-hydr'ts.
Common Mushrooms					
Agaricus Campestris ...	91.30	0.60	0.24	3.75	3.50
Shaggy Coprinus					
Coprinus Comatus	92.19	0.45	0.30	2.81	1.40
Inky Coprinus					
Coprinus Atramestarius	92.31	0.36		2.25	
Common Morel					
Morchella Esculanta ...	89.54	0.49	0.2	3.06	1.60
Sulphury Polyporus					
Polyphorus Sulphuratus	70.80	0.93	0.31	6.00	3.56
Oyster Mushroom					
Pleurotus Ostreatus.....	73.70	0.63	0.33	3.94	4.84
Potatoes.....	75.54	0.40	0.20	2.50	20.90
Cabbage.....	92.50	0.18	0.07	1.3	0.70
Carrots.....	87.50	0.18	0.10	1.3	
Wheat Bread	35.40	1.52	0.06	9.50	52.80
Beefsteak	63.00	3.00		18.75	

Summing up the results of their work the Department states that the food value of mushrooms is not high. The "protein" content ranks with that of potatoes, and they contain less carbohydrate matter. Further, non-albuminous nitrogen has very little food value, and most of the nitrogen in mushrooms is non-albuminous, while from 26 to 59 per cent. of the total solid constituents is indigestible. If, the writer says, a person depended on mushrooms wholly, he would have to consume about 8lbs. per day. As a condiment and food accessory they are useful, but as a steady article of diet they are not to be commended.

With a view of ascertaining the correctness of these results, the writer undertook a series of experiments. Solutions approximating as closely as possible to the natural digestive fluids were prepared. These consisted of faintly acid and alkaline saliva solutions containing the ptyalin ferment, to represent the natural secretions of the mouth, acid pepsin solutions of approximately the strength

of the natural gastric juice, alkaline pancreatin solution, and finally a solution of diastase to ascertain the starchy content of the fungi.

Typical specimens of the *Agaricus* and *Coprinus* species were procured as representatives of the usual commercial mushrooms, together with one or two other varieties of the canned article, the exact nature of which was not ascertained. The digestibility of these in the various solutions was ascertained in various ways. In all cases the fluids were kept at a temperature of 40° C. for twelve hours, in order to approximate the conditions obtaining in the internal economy. The mushrooms were used in the fresh state after being boiled in water for one hour, and also after baking over a gas stove until properly "cooked."

As these digestive experiments only approximate natural conditions, the results can at best only approach accuracy, and, consequently, the writer will not attempt to give exact figures. The results may be briefly summarized.

Ten grammes of the fungi were taken in the fresh state, and also after boiling and baking, and reduced to a fine state of division by passing through a No. 30 sieve. The finely divided matter was then digested in 100 c. c. of the pepsin solution at a temperature of 40° C. for twelve hours. A similar procedure was followed in the case of the other digestive solutions. The results showed that cooking had little effect on the digestibility of the mushrooms, except in the presence of the starch-converting ferments. The amount of solid substance of the mushroom soluble in pepsin or pancreatin solutions did not as a rule exceed 10 per cent. and usually varied between 5 and 10 per cent. In one or two experiments the pepsin solution did not appear to have any action on the fungi at all. The saliva solutions seemed to have very little action, not over 2 per cent. being digested. This possibly was due to their dilution. Diastase possessed most activity, particularly on the boiled mushrooms. The soluble portion averaged ten per cent. and in one or two instances ran as high as fifteen per cent. of the total solid content. In all cases the bulk of the fungus remained undissolved. These results show fairly well that vegetable fungi are, at least, very difficult of digestion. In a series of parallel experiments with beefsteak and potatoes, the latter almost completely disappeared in about two hours' time, while after twelve hours' digestion the mushrooms remained apparently unchanged.

It is easy in view of recent researches to see how the exaggerated ideas of the value of mushrooms as food originated. The old method of ascertaining the proteid value of foods by determining the total nitrogen and multiplying by 6.25 (the factor obtained from percentage composition of proteids) may answer well enough in certain cases, but has long since been found to frequently give erroneous results, as in the case already referred to. The text-book statements that mushrooms average 33 per cent. of proteid matter, while bread only contains 8 per cent., is based on an unfair comparison. The 33 per cent. refers to percentage of solid matter only, while the 8 per cent. of bread is based on the total constituents. The percentage of "protein" in the whole mushroom never exceeds 5 per cent. and the most of this is indigestible, while bread averages 8 per cent. in an almost entirely assimilable form. To deserve the name "vegetable beefsteak" the fresh mushroom should contain about 50 per cent. of available proteid matter.

One of the objects of the Mycological Club is to show the public in general the value of vegetable fungi as articles of diet, and it was with the idea of determining their value satisfactorily that the above experiments were carried out. The results are not what we had hoped for but *magna est veritas et prevalebit*. The fact that the average man has declined persistently to take up mushrooms as good, just as he has declined to use brown bread in preference to white, shows us that "the untutored instinct of the natural man had long since reached the same goal" to which we have been led by the results of experimental research.

THE DIET OF DYSPEPTICS.

By MAX EINHORN, M.D., New York.

A FEW years ago I had the honor of reading a paper before this society, on "Dietetics in Diseases of the Stomach." To-night I wish to discuss more fully a few points which are of eminently practical importance, and which I had at that time broached only superficially. The majority of dyspeptics, or of patients suffering from chronic digestive disorders, are affected with functional or nervous derangements. Most of these patients suffer either from loss of appetite or from gastralgia, sometimes from both, and hence take inappropriate and insufficient nourishment. Thus some live on small quantities of peptonized milk; others on artificial meat extracts (beef juice, liquid peptonoids, etc.). If these dyspeptics adhere to this rigorous diet, they almost always depreciate more and more in health.

A marked fear of food is distinctly observed in all these cases. This symptom I would like to designate as "sitophobia" (fear of food). If patients give in to this sitophobia—which frequently occurs—the dyspeptic symptoms increase more and more, even after the ingestion of small quantities of liquid and pre-digested foods. Soon varied symptoms of inanition manifest themselves, such as dryness in the throat, headache and dizziness, a feeling of decided weakness, intense anæmia, sometimes pernicious anæmia.

Should we therefore be astonished if such patients, addicted to this wrong course of living, gradually waste away and finally succumb?

Either inanition itself, or complications arising in consequence of malnutrition, may easily bring on a fatal issue. As a whole, it is rather surprising how long these patients can live in spite of insufficient nutrition. This goes to show how tenaciously the organism clings to life; it learns to economize its expenditure and to subsist on scanty means. This is the only explanation why these invalids, who, after at first losing considerably in flesh, subsequently maintain their slight bodily weight and are able to lead a meagre existence.

Gentlemen, the number of such emaciated dyspeptics is not small, and every practitioner meets with a few of them every year.

I will now present a few points by means of which these cases may be recognized.

Generally speaking, the term dyspeptic signifies one who suffers from a chronic disorder of his digestive organs, without having, however, any organic affection.

We will have to determine, first, the presence of some protracted ailment (for one or several years); second, the absence of any organic disease (ulcer, stenosis) of the stomach or intestines. An examination of the gastric contents may be omitted in these cases, although the knowledge of the chemical condition of the gastric juice may sometimes be useful with regard to the treatment.

How shall we treat such dyspeptics? Medicaments are not of much value, or play only a subordinate part. The main factor lies in proper nourishment. These patients, who have abstained from most kinds of food for years, must now learn anew to eat. Their stomach and intestines very quickly adapt themselves to this new condition. First and above all, it is of importance to increase the quantity of nourishment; second, to provide a sufficient variety of foods. An ample but too one-sided diet (as a purely milk diet, or hot water and beef) is not suitable for a long period of time, for under this regimen there may be a partial lack of certain substances necessary for the welfare of the organism, and thus may be exerted a deleterious action upon the economy.

In order to improve nutrition, two articles of food, which hitherto have been often avoided by laymen as well as physicians, play an important part. I mean bread and

butter. In my previous paper, I have already hinted at this topic; I now take the liberty of again discussing it.

Bread forms one-third of the total amount of ingested food in health, and besides having nutritive value, serves the purpose of increasing the flow of saliva during its mastication. It also creates an appetite for other food.

Butter not only improves the taste of various kinds of food, but is also in itself a nutriment of the greatest importance. The great number of calories which butter contains (one hundred grams give eight hundred and thirty-seven heat units, while the same amount of bread develops about two hundred and seventeen) shows this in the clearest manner. Another advantage which butter presents is that its volume is only about one-third that of bread. A patient taking about one-quarter of a pound a day receives therewith more than one-half of the heat units required. This quantity of butter is, according to my experience, well borne by most of the patients.

As nutrition plays the principal part in the treatment of these patients, it will not be amiss to give a few hints with regard to its management. To begin with, it does not appear advisable to permit patients who have abstained for a long while from the coarser varieties of food everything at once. This abrupt change may at times be the cause of various unpleasant symptoms; therefore it should be accomplished gradually. At first give, besides milk, gruels, and thickened soups, eggs beaten up in milk, etc. A few days later begin to add to this bill of fare zwieback or crackers with butter; then permit meat, the white of chicken and well-scraped beef; next, mashed potatoes; still later give wheaten bread, baked or boiled potatoes, soft-boiled or scrambled eggs, oysters; at last allow vegetables and fruits.

An essential point with regard to nutrition is punctuality in the taking of meals. In most of these cases, in which a gain in weight is of great importance, frequent meals (five or six daily) will be advisable. Although it does not appear advantageous to prescribe for the patient the quantities of the various foods in exact weight (grams or ounces)—as by so doing they are too easily reminded of their ability or inability to digest this or that quantity and no more—it is nevertheless of value to mention approximate figures by which they may be guided or below which they shall not go. Thus, for example, they may be told to eat as much as their neighbours at table, or that they shall take ten ounces of milk at this or that meal; or, as I frequently advise, that they shall consume one-quarter of a pound of butter a day. Emphasize those points which appear to be the most important, and leave the patient great liberty in all other particulars. We must strive to familiarize the patient with the idea that ample nourishment will strengthen his organs (including the stomach and intestines), and we must always endeavour to dispel the fear of food with which he is harassed.

For patients who are greatly run down and are confined to bed a nurse is advisable, who shall see that the physician's orders (with regard to food) are promptly carried out. Massage may certainly be used on and off as an adjuvant. For patients who are up and about, a nurse is unnecessary. In the latter instance it is important to see that the patient's time is properly occupied; by that I mean to say that the patients should lead a rational mode of living, and should work neither too much or too little. With some patients (wealthy people have no vocation) we must try to give them something to do; while in the case of merchants whose business strain is too great, lawyers, and physicians, we should advise that sufficient leisure be taken. The points just mentioned serve in a high degree to render possible a healthy nutrition, for only a rational mode of living gives sufficient appetite for abundant food.

In cases in which the condition of the gastric juice is known there are still other special rules with regard to diet; for, as is well-known to you, we should give abundant quantities of meat in hyperchlorhydria, while in

hypochlorhydria and achylia gastrica the starchy substances (and vegetable food) should predominate.

The above suggestions, however, play the principal part in the treatment, and good results may be obtained often enough without analyzing the gastric contents.

Gentlemen, I have endeavoured to give you in this paper a few practical hints with regard to the nourishment of most patients afflicted with chronic stomach troubles. If I have succeeded in convincing you that it is much more important to take care that such patients are sensibly nourished than to forbid them anything, I shall feel that my object has been accomplished.

ADULTERATION OF BAKING POWDER.

THE medical officer of Health for Liverpool submitted a list of the prosecutions under the Sale of Food and Drugs Act for the quarter ending March 31st, 1899. A very much used article—baking powder—has been held not to come within the scope of the Food and Drugs Act, on account of it being neither a food nor a drug, consequently no proceedings can be taken in respect to these things, many of which are likely to be prejudicial to health. One baking powder, twice conspicuously marked on the packet "warranted genuine," "the only wholesome substitute for yeast," was found to contain 30 per cent. of alum. No proceedings, however, were taken in the case.

Upon the suggestion of several members, Dr. Hope was asked to forward a note to the Local Government Board, calling attention to baking powder being outside the scope of the Food and Drugs Act.

Dr. Hope stated that he would confer with the Town Clerk on the matter, as it had been decided by judges sitting in the High Court that baking powder was neither food nor a drug.

THE NEW FOOD AND DRUGS BILL.

MR. JOHN ELLIS has been appointed to act as Chairman of the Standing Committee on trade for the Food and Drugs Bill. The members added by the Committee of Selection to the standing Committee with reference to the Measure are Sir Charles Cameron, Mr. Victor Cavendish, Mr. Heywood Johnston, Mr. Lewis Fry, Mr. H. Hobhouse, Mr. Brynmor Jones, Mr. Kearley, Mr. Kilbride, Sir John Leng, Mr. Llewelyn, Mr. H. Lopes, Mr. Donald Nicol, Mr. G. Palmer, and Mr. John Redmond. There was very great anxiety among members to serve on the Committee for the Food and Drugs Bill, and it is understood that considerably over one hundred members expressed their desire to the Committee of Selection to be appointed.

THE SALE OF FOOD AND DRUGS ACT IN LEEDS.

Mr. T. Fairley, City Analyst, reports on Analyses made for the City of Leeds during the quarter ending March 31st, 1899, that the samples received have been:—Milk, 89; Condensed Separated Milk, 5; Butter, 9; Lard, 1; Cheese, 2; Plum Jam, 1; Sugar, 1; Milk of Sulphur, 2; total, 110.

Of the milks, five were adulterated with thirty-one, seventeen, fourteen, thirteen, and ten per cent. of water respectively, as compared with the lowest quality of genuine milk; thirty-four were reported to be of low quality and were all probably adulterated with from ten to twelve per cent. of water. Thus, practically half the milk samples were adulterated, but only in five cases was it safe to return them as such, owing to the very low standard generally adopted.

Five of the butters were adulterated with foreign fat, the adulteration varying from eighty-three to sixty-eight and a half per cent. In addition to foreign fat, one of these samples contained boric compounds corresponding

to nearly quarter of one per cent. (about 16 grains per pound) of boric acid.

One of the samples of milk of sulphur was adulterated with calcium sulphate corresponding to sixty-two and a half per cent. of hydrated calcium sulphate.

SURREPTITIOUS DRUGGING OF FOODS.

THE list of drugs used regularly and extensively for the preservation of food, and especially of milk and butter, is constantly being added to. The latest introduction is fluoride of sodium, under the name of "crystoleine." Whether, says *The Standard*, this is more or less dangerous than the preparations of borax, salicylic acid, formaldehyde, or other antiseptics with which consumers of milk, butter, bacon, preserved meat, and dried or tinned fruit have been dosed to an unknown extent heretofore is not certain. The action of these drugs upon the human system is a subject of disputation, and we are no nearer to any authoritative decisions in relation to their common use than we were ten years ago. Moreover, it is doubtful whether we shall be any nearer after the Sale of Food and Drugs Bill has become law, if it passes in its present form, as the author of that measure went out of his way to declare that "butter or milk shall not be deemed to be adulterated by reason only of the addition of any preservative or colouring matter which does not render the butter or milk injurious to health"; and it is doubtful whether the Board of Agriculture will undertake to determine questions of medical import under the powers given in Clause 4, even supposing that they are sufficiently elastic. If a Board of Experts had been established to determine questions of purity and wholesomeness, as proposed by the Select Committee on Food Adulteration, the use of preservatives would have been one of the first questions to be considered; but a Government Department is not in itself an efficient tribunal in relation to such subjects. Perhaps the best plan would be the appointment of a Departmental Commission to pronounce authoritatively upon the use of food preservatives, and in proportions in which any to be allowed at all may be used.

HOW CATTLE ARE CLASSED IN THE STATES.

THE "Embalmed Beef" inquiry presently going on in the states has elicited some curious facts concerning the classification of cattle. For example:—

Tickers: Cattle infested with "ticks."

Canners: Cattle, including tickers, too poor and emaciated to sell as fresh meat, and thence canned.

Downers: Cattle that fall in the cars and are trampled upon by the others.

Skaters; Cattle that have fever so that the flavour of the meat must be disguised; they become sausage.

The popular knowledge of the economy of beef packing is gaining a great deal every day through the testimony presented to the board. It would almost have been cheaper for some of the contractors if there had been no war.—*Chicago Drovers' Journal*.

CORRESPONDENCE.

To the Editor of FOOD AND SANITATION.

SEC. 27, SALE OF FOOD AND DRUGS ACT, 1875.

I see you have a report of our case under this Section, which was partly heard by our City Bench on March 28th last, in your issue of April 8th. You may be interested to hear that the defendant, John Foster, of Lambley, Notts., was ultimately convicted, and fined £5 and costs.

Yours faithfully,

PHILLIP BOOBYER, M.B.,
Medical Officer of Health, Nottingham,

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Food and Sanitation.

SATURDAY, APRIL 29, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

All communications for the Editor of "Food and Sanitation" must be addressed to

4, AVE MARIA-LANE,
LONDON, E.C.

THE IMPORTANCE OF GERM FREE WATER.

THE action of the White Star Line in ensuring absolutely pure germ free water for passengers using their new steamer, Oceanic, by installing a complete Pasteur filter plant to deal with the entire

drinking water used on the vessel, is to be commended, and shows a regard for the health of passengers which should meet with recognition by travellers on the American liners. We have long been surprised at the indifference of our Steamship Companies to the vital question of pure water, but now that the White Star Line has led the way it is to be hoped other liners will follow the good example, and that the days of the wretched disease distributors and filth conservers hitherto used as filters are numbered, and that they will be replaced on all vessels by the Pasteur filter process, which alone yields a continuous supply of germ free water. The extensive experiments of Drs. Sims Woodhead, and Cartwright Wood showed the dangerous folly of using any of the ordinary filters, and the enormous decline in typhoid in the French army notified by M. de Freycinet proved beyond dispute how necessary is the Pasteur filter for drinking water.

The terrible outbreaks of typhoid at Maidstone and Worthing are still fresh in the public memory, but unhappily the lesson they taught has not been thoroughly learnt. How many, for example, of our dairy farmers take the trouble to secure pure water for their cattle and for use in the dairy, although milk is, of all substances, nearly the most susceptible to pollution by disease germs, and has times innumerable been proved to be the cause of disastrous outbreaks of typhoid and other diseases? A well-informed writer in the *Manchester Guardian* gave recently the following picture of the conditions surrounding dairy farming, and everyone conversant with country life knows it is not over-strained:—
"Having regard to the efforts which are being made at present with the view of preventing milk from tuberculous cattle reaching and carrying infection to the consumer, it might be opportune to point out another serious danger existing at the very source of our milk supply, in the hope that if attention is drawn to it the subject may receive the consideration it demands. It is impossible to exaggerate the importance of a supply of pure water for the cattle; impure water undoubtedly affects the quality of the milk, and yet this point receives scant attention from any except the most up-to-date farmer. In countless cases the source of supply is a stagnant pond, polluted daily by the cattle themselves. These ponds, or "pits" as they are generally designated, have been used as watering-places for cattle for generations, and we may safely assume that they are simply teeming with bacteria, which must inevitably contaminate the milk, even if the cattle are free from disease. In the early part of the century the bulk of the milk was converted into cheese, a process which effectually destroyed any germ of infection; but it is now almost wholly required by the vastly increased population of our towns, and the dangers of conveying infection are therefore increased enormously. It is an altogether exceptional case where there is not a supply of pure water within easy reach, from springs, drawwells, pumps, and so forth, and it would only be necessary to devise a simple means of making it available for the

cattle. *It would seem to be the duty of the authorities responsible to make regulations that would ensure this being done, and the work of seeing the regulations carried thoroughly into effect would devolve upon the present sanitary inspector."*

Paisley, Hornsey, and several other places have shown how true this picture is, but how is the evil to be remedied? Sanitary experts know it is impossible to secure pure water for dairying save by filtration, and in no department of food preparation is it so necessary to exclude all germs from water as it is in dairying; for here, indeed, cleanliness is almost everything. Yet how many of our dairy farmers have ever heard of Pasteur's discovery how to produce germ free water? Very few, we fear. All the sanitary inspection in the world would not ensure the use of absolutely unpolluted water on dairy farms, but sanitary instruction would go a long way towards doing so. If local authorities would empower their inspectors to point out the necessity for the use of Pasteur filters on all the dairy farms they visit much good would be done. But too many dairy farmers, although the cost of a Pasteur filter plant is not great, would prefer to shirk their obligations to the public and continue to disseminate disease infected milk. To really cope satisfactorily with the evil local authorities ought to have the power to compel dairy farmers to employ Pasteur filtration in all cases where chemical or bacterial examinations disclose impurities in the water used. When we consider how terrible is the rate of infant mortality, which in Birmingham, Sheffield, Manchester, and other large cities reaches the appalling total of about 145 per 1,000 births, we have reason enough for putting at the service of humanity all the resources of civilisation. Our dairy farmers complain of foreign competition. If our supplies were beyond question then we should have strong ground for objecting to the importation of milk or butter which might be unhygienically prepared. At present we do not occupy such a position as justifies complaint against infected foreign food supplies. It therefore behoves us to put our own house in order, and that at once.

SARDINE TRADE SWINDLES.

It is known to many that there is near Deal a factory where sprats undergo a transmogrification into sardines, the tinning and preparation of the translated article, giving employment to a large number of persons. How many more spurious sardine factories exist around our coast it would be hard to say, but their existence is very unfair to the firms who put up the genuine fish. Recently Mr. F. W. Richardson, F.I.C., public analyst to the city of Bradford found, amongst other frauds, one which was sold as sardines in olive oil, but the oil was only cotton seed oil, and the so called sardines merely herrings. An examination of the bulk of the sardines sold would disclose we believe, the fact that there is an enormous amount of substitution in the trade, and that the real sardina-clupea

is only put up by a small number of the sardine-curers. Hitherto we think inspectors under the Food and Drugs Acts have not thought of taking samples for analysis, but now that the fraud of canning herrings in cotton seed oil and selling them as sardines in olive oil has been discovered, our readers will no doubt see to its suppression. Meanwhile retailers who sell sardines would do well to be on their guard, and be sure they buy genuine goods. From a business point of view, caution and a guarantee are requisite; the more so as there are only one or two firms like Crosse and Blackwell who guarantee the genuineness of their tinned sardines.

SOMERSET HOUSE AGREES WITH AN ANALYST ON MILK.

AN extraordinary incident occurred at Queenstown Petty Sessions on April 17th. On the 29th ult. Sergeant Ross, Inspector under the Food and Drugs Act, summoned Miss Hannah Atkinson for selling milk to customers deficient in fat to the extent of 12 per cent. On behalf of Miss Atkinson, an application to have the case adjourned and that a sample of the milk be sent to Somerset House for analysis, was granted. The case came on again on April 17th, the result of the Somerset House analysis having been received. It stated the standard was 3.00 of fat, and that the sample received was deficient 9 per cent. of that standard. Miss Atkinson was fined 10s. and 20s. costs.

Somerset House appears to have come to the penitent form at last.

PEPPER AND PEPPER HUSK: A WARNING TO RETAILERS.

At Liverpool, on April 19th, Jane Church, of 14, Springfield-street, was summoned for selling pepper which was not of the nature, substance, and quality demanded according to the law. The evidence given showed that an inspector of the Health Department of the Corporation purchased six half pennyworth of white pepper from the defendant's shop. The commodity was sold in packets, and labelled "Genuine ground white pepper." It was found on analysis that the pepper contained 85 per cent. of genuine white pepper, the other 15 per cent. being black pepper husk, which the prosecutor, Mr. Pierce, said was mixed with the white pepper for the purpose of cheapening the article. Mr. Rudd defended. He argued that his client had sold the pepper in the condition in which she had bought it, and she had not done anything with it in order to deceive the public. The purchaser had got good value for the money, and whatever offence there might be it was of a purely technical character and not wilful. Defendant was fined 10s. and costs.

We trust Jane Church will take action against the wholesale house who sold it to her.

MARGARINE AS BUTTER.

At Nottingham, on April 19th, Thomas Tickner, carrying on business at Urban-road, Carlton, was summoned for selling adulterated butter on the 24th ult.—Defendant pleaded not guilty.—Mr. Crabtree, inspector of Food and Drugs to the County Council, deposed that on the day named he purchased half a pound of butter which

was exposed on a dish and marked "Pure butter." He sent a sample to the public analyst, who declared it to be margarine containing only 8 per cent. of real butter.—Defendant said he bought it for pure butter, and was accustomed to purchasing one kind, which he sold in the same state to his customers.—The person who sold the butter to defendant was called, and said he had on several occasions sold defendant both pure butter and margarine, which was labelled.—Defendant was fined £5.

At West London, on April 19th, William Osborn, dealer, carrying on business at 371, Portobello-road, Notting-hill, was summoned by the Butter Association for, having sold margarine by retail, delivering it to a customer in a wrapper on which was not printed in capital letters not less than a quarter of an inch square "margarine." Mr. Ricketts, solicitor, prosecuted for the association, and Mr. Oswald Hanson defended. The sale was not disputed, but Mr. Hanson raised two objections to the proceedings—first, that margarine being a perishable article, information of the prosecution should have been laid within 28 days of the purchase; and secondly that the Act had been complied with, inasmuch as the article was wrapped in a paper on which was printed the word margarine. The first objection failed, because Mr. Cassel, the analyst to several public authorities, proved that the article was not a perishable one in the sense suggested. A wrapper identical with the one in which the margarine was handed to the customer was produced for his worship's inspection. It bore the word "margarine," but it was accompanied with other matter in the nature of a trade advertisement. Mr. Hanson argued at some length that the statute was complied with, as the letters stood out as a word by itself. He quoted a decision in the case of "Fyfe v. McLaughlin" in support of his contention. Mr. Lane, Q.C., overruled the contention, on the ground that the word margarine as printed was associated with a trade advertisement. He imposed a penalty of £5 with £10 10s. costs.

At Waltham Abbey, on April 18th, Wallace Thompson, Sun-street, Waltham Abbey, was summoned for unlawfully selling to Markham Kitto butter which was not of the nature and quality demanded, and also for selling margarine otherwise than in a marked wrapper.—Walter Harris, assistant to Captain Kitto, deposed that he went to defendant's shop and asked the assistant for half a pound of shilling butter. When he had got it witness told him he had bought it for the inspector. The inspector (Captain Kitto) came in, and witness handed the butter to him.—Captain Kitto said he informed the lad that the butter had been purchased for analysis. The analyst's report showed that the butter contained 80 per cent. of foreign fat. Witness examined the wrapper in which the butter was placed by defendant's assistant, and found it had not got the word "margarine" printed on it.—Defendant said his errand boy happened to be in charge, and not an assistant. The boy had no business to serve anyone. The boy made an unfortunate mistake.—Mr. Edwards: You left the boy in charge of the shop?—Defendant: It was only for two or three minutes. The boy, when asked where he took the butter from, pointed to a piece of margarine on the butter block. Witness had a few minutes before weighed some, and in a hurry had forgotten to return the remainder back to its place.—The Bench imposed a fine of £1 in each case and costs—£3 14s. in all.

A QUEER MILK TRADE.

At West Ham, on April 19, James Grant, milk dealer, of 19, Holloway Road, Leytonstone, was summoned on two informations for selling milk from which one-fourth of its original cream had been abstracted and 44 per cent. of water had been added, and which contained an excess of chlorine equivalent to an addition of 180 grains of salt per

gallon. Defendant, when asked for a sample of milk, said he had none, and when he did at last serve it he said, "You see I am not selling you milk," at the same time pointing to brass labels on his can. One, about three inches by one inch, bore the words "milk and water," and the other, four inches by two, of an oval shape, had on it "skim milk diluted." Mr. King, for the defence, said that the defendant sold only what he professed to sell, "milk and water," and that, therefore, there was no case against him. Mr. Grant was called, and said he had carried on business for 14 years and had always sold his milk out of the same can. He told his customers it was milk and water—he mixed it for them—and they were always satisfied with it. He sold it at $\frac{3}{4}$ d. a pint, and there was nothing injurious in it. He only supplied his own customers and never sold in the street. Mr. Baggallay said the point of the case was that what little milk there was in the mixture had had a fourth of cream abstracted. Defendant would be fined £5 and £1 2s. 6d. costs.

ADULTERATION IN DURHAM.

Strong Remarks by a Magistrate.

At the Durham County Police Court, on April 19th, Nicholas S. Mohon, grocer, of Ferryhill Station, was charged under the Food and Drugs Act with selling

SEIDLITZ POWDERS

which were adulterated, on February 22.

Mr. Scott Elder, a County Council Inspector, prosecuted, and said the samples bought at the defendant's shop were deficient in every one of the ingredients of which they were composed. They were deficient 14 per cent. in sodium potassium, 20 per cent. in sodium bicarbonate, and 36 per cent. in tartaric acid.

The defendant pleaded guilty, and produced a letter from the wholesale dealers who supplied him, stating that they were to blame, that the adulteration was due to the carelessness of their packers, and that they would pay any fine.

In answer to the Bench, the defendant said he had not altered the powder after receiving it from the wholesale people.

The Chairman (Canon Greenwell) said the case was a very bad one, and they would inflict the full penalty, which they hoped would be a lesson to people to prevent this abominable adulteration by which the whole public were cheated. A poor devil who stole twopence was sent to gaol, but these people who systematically defrauded the public got off with nothing. It was nothing less than robbery. The defendant was fined £20 and costs.

CAMPHORATED OIL.

Thomas Christelow, grocer, also of Ferryhill Village, was charged with selling adulterated camphorated oil, on the same date.

Mr. Scott Elder, who prosecuted, said the sample purchased from the defendant contained no less than 60 per cent. of cotton seed oil, which had been substituted for olive oil. The cost of olive oil was from 5s. to 7s. 6d. a gallon, whilst cotton oil could be bought at 2s. 10d. a gallon.

Defendant produced a letter from the wholesale dealers stating that they regretted the circumstances, and would pay the fine.

A fine of £20 and costs in this case was also inflicted.

VIRTUOUS AND ANCIENT CITY.

The Chairman (Canon Greenwell): You have no jurisdiction within the borough and ancient city of Durham?

Mr. Scott Elder: No, Sir.

The Chairman: I think there is no inspection.

Mr. Scott Elder: I think there is some inspection.

The Chairman: I was afraid I was buying all kinds of adulterated articles.

Mr. Scott Elder: I am quite sure our lively Town Council will look after that.

The Chairman: I am afraid the Town Council look after their own interests rather than the interests of their unfortunate constituents. I believe there is no real inspection. There certainly is not of milk. I know I suffer very much indeed from getting milk of an inferior quality. I was speaking to our inspector, and he said the milk was inspected outside the borough, when in Western Hill and other places just outside, and found to be perfectly pure, but when it got inside the borough it was adulterated to a very high proportion indeed with water, and I was one of the unfortunate persons who got that adulterated milk. As long as it is in the county, where there is an inspection, it is pure, but as soon as it gets within the limits of this ancient and virtuous city it is watered. (Laughter.) He was sorry the Mayor was not on the Bench, but he was in the Second Court.

WATER AT SPIRIT PRICES.

At Porth, on April 20, Rachael Rees, landlady of the Butchers' Arms Hotel, Penygraig, was summoned for selling adulterated spirits. Mr. J. Phillips, solicitor, Pontypridd, defended. The county analyst certified that the whisky sold by defendant was 41 degrees under proof, instead of only 25 degrees. There was also a charge with regard to some rum purchased of defendant, but Mr. Phillips submitted that the portion of the spirit returned by the county analyst did not arrive the same day as required by the Act. There was no intention to defraud customers, as a card had been conspicuously placed in the bar stating that all spirits were diluted. The Bench dismissed the last case on the objection made by Mr. Phillips, but fined her £1 and costs in the first case.—John Morgan, of the Gethin Hotel, Penrhiweibr, sold half a pint of whisky which proved to be 39 degrees under proof, and gin which was 48½ degrees under proof, and not 35, as allowed. In reply to Mr. Phillips, Supt. Coles stated that in these cases also the spirits had not been returned the same day as the certificates from the analyst. On these grounds the Bench dismissed both cases.

MUSTARD AND FLOUR.

John Scully, 1, Brefni Terrace, South Circular Road, Dublin, was fined £1, on April 20, for selling mustard adulterated with 40 per cent. of foreign farinaceous matter.

Henry Butle, 1, Portobello Road, was fined £1 for selling mustard adulterated with 50 per cent. of foreign farinaceous matter.

Stewart Fulbertson, 81, Thomas Street, was fined 10s. for selling mustard adulterated with 15 per cent of foreign farinaceous matter.

MORE REVOLTING BAD TINNED FOOD REVELATIONS.

At the County of London Sessions, on April 20th, before Mr. Loveland-Loveland, Q.C., Joseph Fell, 45, provision merchant, at present undergoing a sentence of imprisonment in Her Majesty's Prison, Wandsworth, was brought under a writ of *habeas corpus* to receive punishment on an indictment upon which he was convicted on the 24th March last for having unlawfully sold to one Henry Dawe, a general provision dealer, of Clerkenwell, 58 tins of condensed milk intended for the food of man, which when, purchased, were unsound, unwholesome, and unfit for human consumption. Mr. Whatley and Mr. Nolan prosecuted for the Clerkenwell Vestry authorities,

and Mr. Hawtin conducted the defence. The prisoner had carried on business as Vernon Fells and Co., Claremont Works, Sage Street, Shadwell, and in November last year he called on Messrs. Lehman and Co., milk manufacturers and condensers, of 78, Turnmill Street, E.C., and purchased from them many cases of unlabelled tins of condensed milk at 2/6 a case. The reason they were not then labelled was that about two-thirds of the contents of the cases were looked upon by the sellers as doubtful on account of their "blown" or bulgy appearance, signifying that the contents had commenced the process of fermentation, and a powerful gas had generated inside, leaving no doubt in the minds of experienced persons that the milk was decomposed. Messrs. Lehman invoiced them as "not sold as sound or fit for human food," and it was understood that the prisoner bought them for "pigs' food." If the case had been sound throughout, no description would have accompanied the sale, and the wholesale price would have been 12/6 instead of 2/6 a case. It was alleged that Fell sorted out the milk, and selecting those tins he thought would pass off without suspicion, he afterwards pricked the "blown" tins, thus allowing the gas to escape, had them labelled as "The Honey Brand," and sold them to people keeping small general shops at an average price of 9/6 a case. Mr. Dawe first of all purchased some salmon, but this was bad, and he exchanged it for tinned condensed milk. Most of this was unsaleable from its condition, and he communicated with Sanitary Inspector John Bartlett, of the Clerkenwell Vestry, and this prosecution ensued. Many tins of milk were seized and condemned, and with Dr. Glaister and Dr. Thomas, the medical officers for Clerkenwell and Limehouse respectively, Bartlett visited the prisoner's place in Shadwell. There, apparently, the trade of a tinned provision dealer was carried on, unlabelled tins of different goods and labels lying about, and a paste pot and brush in use, as well as a stencil to mark the cases with the words "Made in Holland." Bad condensed milk, sardines, salmon, lobster, pineapple, peaches, oysters, and soups were stocked there, and altogether nearly 4,000 tins of all kinds of unsound provisions were carted away and condemned. Some of the tins evidently in preparation for the market had been pricked to let the gas out, and resoldered, so that they had lost their "blown" appearance, although the generation would be continuous, and cause the ends to bulge out again later on. Dr. Thomas said that carbon di-oxide gas was mostly generated when the condensed milk was in a state of decomposition. Artificial sugar tended to preserve the milk, he thought, but "milk" sugar tended, in his opinion, to "turn" the contents. All tins that were "blown" would be unfit for human food. A certain acid was often put into milk to preserve it, but this was highly injurious to health. The defence was that the selling was an act of carelessness, and not one done with a wilful intention. For the depositing with the intention of sale for human consumption of the bad tinned goods at his Shadwell premises, Fell was ordered four months' imprisonment with hard labour by Mr. Dickenson at the Thames Police Court on the 6th April. For the sale in Clerkenwell he received sentence on April 19. It was urged on his behalf that as he was not in a position to pay the costs ordered by the magistrate he would practically have to serve five months in prison. Disastrous consequences, of course, followed the convictions, and his family were now entirely dependent on a son of 17. Formerly he was a respectable tradesman in a large way, but he was adjudicated bankrupt a year or two since.

Mr. Loveland-Loveland, in passing sentence, said:—The Bench have carefully considered this case, and the fearful amount of harm that could be done by persons trafficking in these goods—sending them out broadcast into the world for poor people to consume, and perhaps ruin their healths. The punishment allowed by the Act of Parliament is totally inadequate. If I had the power I would give you a very long sentence indeed to serve as a warning to others. It is a monstrous offence, and I give

you the heaviest sentence the law allows—six months' hard labour, to date from the time of your conviction.

Sanitary Inspector Bartlett was warmly commended.

DRUG ADULTERATION.

At Ripon, on April 21st, Joseph Topham Verity, of Pateley Bridge, chemist, was summoned, on the information of Henry Gamble, Inspector under the Food and Drugs Act, Harrogate, for having, on the 9th March, sold spirits of sol volatile which contained only three-eighths of the amount of active ingredients of ammonia and ammonium carbonate prescribed by the British Pharmacopœia. The case was proved by the certificate of the county analyst, and the defendant was fined £2 6s. 5d., including costs.—There was also a charge against Thomas Lockwood, chemist, of Pateley Bridge, for having on the same day sold camphorated oil containing 14 per cent. of camphor and 86 per cent. of sesame oil, instead of 21 per cent. of camphor and 79 per cent. of olive oil; the sesame oil being substituted for olive oil, with which the camphorated oil is directed to be prepared by the British Pharmacopœia. Mr. Gamble proved the case by submitting the county analyst's certificate.—The defendant complained of the difficulty which chemists had in making all the changes prescribed by the British Pharmacopœia, especially in matters of external application, the result being loss both in money and drugs. He also submitted that camphor rapidly evaporated. Mr. Gamble pointed out that the last edition of the British Pharmacopœia was issued in May, 1898. The defendant was fined £2 3s. 2d., including costs.

At Halifax, on April 22nd, Richard B. Paget, chemist, Skircoat, was summoned at the instance of W. H. S. Crabtree, food and drugs inspector to the West Riding County Council, for selling camphorated oil that was adulterated. Inspector Crabtree proved that on March 23rd he purchased a quantity of the oil in question at the defendant's shop, which was found, on analysis, to contain only 15 per cent. of camphor instead of 21 per cent., as required. The defendant's wife appeared, and said that she sold the article as it was obtained from the wholesale dealer. She produced a receipt from the latter specifying that it was camphorated oil. The Chairman pointed out that a receipt was not in itself a guarantee of genuineness. Shopkeepers must learn by experience that they cannot sell to the public anything but the genuine article, and that on them rests the responsibility. They must take care to have a written guarantee as to genuineness. A fine of 10s. and 19s. costs was imposed.—Benjamin F. Kitson, grocer, Skircoat, was charged with selling camphorated oil which was made up of 17.5 per cent. of camphor, 15 per cent. of mineral oil, and 67.5 per cent. of olive oil. The defendant's daughter, Emily Kitson, appeared, and complained of the hardships on small shopkeepers caused by the new requirements of the Pharmacopœia, which, they were now given to understand—though they did not previously—came into force last May. The defendant's stock of camphorated oil was purchased more than twelve months ago. Inspector Crabtree: In this case it was not genuine according to the old requirements, as it contained mineral oil. A fine of 10s. and 19s. costs was imposed.

MORE PUTRID SALMON.

At South-Western Police Court, London, Mr. Isaac Young, the chief sanitary inspector for the parish of Battersea, attended the court and applied to Mr. Francis for an order, under the Public Health Act, condemning some tins of salmon which he had seized at a shop in York-road, Battersea, and which he considered unfit for

the food of man. Mr. Francis: I am not going to smell the stuff; I object to poke my nose into putrid fish.—Mr. Young: I do not think it will be necessary for your Worship to smell the fish.—Mr. Francis: I am not going to see the stuff at all. It is only necessary for you to state on oath that the fish is bad.—Mr. Young did so, and added that, in his opinion, the tins had been pricked to dissipate the gases, and the fish had subsequently decomposed.—His Worship made the order of condemnation.

GOLDEN SYRUP.

At Guildford, Robert Murray and James Raeburn, trading as the Clydesdale Refining and Packing Company, Glasgow, were summoned for having on or about October 26th sold "golden syrup" to Messrs. Gloster and Sons, wholesale grocers, of Woking, with a label falsely describing the article. Inspector Cliffe prosecuted, and stated that on February 24th he purchased of Mr. Charles W. Blackaby, grocer, Brookwood, a tin of "golden syrup," for which he paid 3d. The analyst's certificate showed that the syrup was composed of 40 per cent. of cane sugar syrup and 60 per cent. of glucose syrup. The label stated that it was "Clydesdale pure cane golden syrup, made from pure cane sugar." That, he thought, was sufficient evidence to prove that it was a false label. Mr. Blackaby had been convicted, and fined 10s. costs. Mr. C. W. Blackaby gave evidence to the effect that he purchased the syrup from Messrs. Gloster and Sons. He did not receive any intimation from the company stating that the syrup contained glucose, or that it did not contain glucose. He wrote to the company informing them that he had received a summons, and since his conviction he had received a communication from them. Mr. Cliffe stated that it was not a fact, as had been stated at the hearing of a previous summons, that all the company's customers had received labels to put on the tins containing the syrup. A representative of Messrs. Gloster and Sons stated that he sold the tin to Mr. Blackaby on February 17th. It was purchased from the Clydesdale Company on October 26th. He had now received labels to affix to the tins. The magistrates imposed a penalty of £5, including costs.

ALLEGED ADULTERATION OF CAPER TEA.

Eminent Analysts Differ.

At the Derby County Police Court on April 21, William Henry Woodward and Edward Herbert Woodward, grocers, of Draycott, were summoned for selling four ounces of caper tea, which was adulterated with at least 6 per cent. of ferruginous sand and small stones, at Draycott, on 23rd January.—Mr. R. S. Clifford was for the prosecution, and Mr. B. W. Moore defended.—Mr. Clifford said the formal portion of the evidence was taken on the 34th February, and Mr. Moore, who then appeared for the defence, made an application that the third sample should be sent to Somerset House for analysis. The Somerset House analysis completely bore out the analysis of Mr. White, the County Analyst, i.e., that there was six per cent. of mineral matter in the tea. At the conclusion of their report the Somerset House authorities went on to say, "We are of opinion," &c., and he (Mr. Clifford) would submit that that paragraph was not admissible as evidence. It was probable that Mr. Moore would submit that the defendants were unaware that they were creating any offence, but that, under the Food and Drugs Act, was no defence.—Mr. Lewin, Superintendent Analyst at Somerset House, said that he had analysed the sample.—Mr. Clifford: And to what extent was it adulterated?—Mr. Lewin: I don't say it is adulterated. There was 6.4 of silica and sand present. The silica might have come partly from the wood of the tea, and partly from the soil. This

particular tea consisted mostly of leaf stalk, and showed a lot of silica on that account. Questioned as to when he would consider tea adulterated, witness said that this particular tea came very near the limit. He did not agree with Dr. Bell's statement in his book on the subject of adulteration. A point that could not be lost sight of in this case was the fact that the tea had passed the Customs House inspectors, and was deemed by them to be commercial tea. He believed the Customs House, after analysis, would have deliberately passed the tea as fit for home consumption. So long as tea had passed the Customs he really did not think the public analyst had much to do with it.—Cross-examined by Mr. Moore, witness said that the amount of silica and sand in the tea was either natural to the tea itself or became mixed in the course of preparation. The analyst at the Customs House had passed tea containing more mineral matter than was present in this case.—Mr. White, the Derbyshire county analyst, presented his report of his analysis of the tea, and expressed the opinion that the sand and small stones certainly ought not to have been present. During the last 18 months he had analysed about 70 samples of caper tea and proceedings had been taken in four cases, convictions being obtained in other courts when the adulteration was less than in this case. He believed that in this case the mineral matter had been purposely added, though he was prepared to believe it had not been adulterated since it came out of bond.—Dr. Bostock Hill, professor at Mason's College, Birmingham, and public analyst of Warwickshire, stated that his opinion was that there was excessive adulteration in this case.—Mr. Moore, in his address for the defence, said that the question to his mind had resolved itself into a duel between public analysts and the authorities at the Customs House and Somerset House. But what object could the Customs House or Somerset House authorities have to pass a tea which was not fit for consumption, and he (Mr. Moore) commended the opinion of Mr. Lewin to the consideration of the Bench.—After half an hour's deliberation the Bench decided that the amount of extraneous matter which had been proved to have existed in the caper tea purchased from the two defendants was, upon the evidence, unavoidably mixed with the same in the process of collection, and therefore there would be no conviction.—Mr. Moore applied for costs, and the Bench allowed two guineas towards the defendants' costs.

COLD STORAGE FOR FRUIT.

A number of those interested in cold storage of fruit met at the Tavistock Hotel, Covent Garden, recently, when Mr. W. N. White, managing director of the firm of Messrs. W. N. White and Co., Limited, gave some very interesting facts and figures. A case of California Newtown Pippins was shown by Mr. White, one of a parcel of some 30,000 cases placed in cold stores last December. Everyone present admired the fresh appearance of the fruit, and commented most favourably on the taste and delicate aroma of them. Mr. White explained that in California every kind of fruit is wrapped in paper with the exception of cherries, which are too small, and, of course, others whose very soft nature precludes the possibility of wrapping. He mentioned that if English fruit-growers were to adopt similar measures, and only send to market the best fruit, evaporating or using for jam or jelly the smaller and inferior, much better results would be secured. For one thing consumption would increase, because the fruit would be nearer perfection, and the public would want double the quantity. He stated that these California Newtown Pippins, although not within the reach of the many, had met with a very good reception this season from those who could afford to buy them. Previous to this season the supplies had ranged from 5,000 to 10,000 cases during the whole season, but during the present season Messrs. White and Co. alone had handled about

100,000 cases. In the month of December last the firm had about 60,000 cases direct from the packers in California, the packers there having to send them forward before the cold weather set in, as the journey through the Rockies might spoil the fruit. Fully believing in the merits of cold stores, Mr. White advised the storing of the 30,000 cases already mentioned. Some were stored in New York, some in London—at the premises of the Union Cold Storage Company—and the balance in Liverpool, and the results proved that Mr. White was right in his ideas, as, after paying all expenses, including the cost of cold storing the fruit, the 30,000 cases will show a profit of about £4,500 over what they would have made if sold last December. The remainder of the 30,000 cases, which were disposed of on the day of the gathering, fetched a price from 3s. to 3s. 6d. per case in advance of that which would have been realised four months previously. Mr. White believed that the first shipment of fruit in cold storage was that of the s.s. *Nonpareil*, which brought over in 1886 a refrigerated cargo of fruit from the West Indies, and landed it in this country in an excellent state of preservation. In 1888 the s.s. *Oceana* brought from Melbourne in cold storage a cargo of peaches, which also arrived in a good condition.

Mr. White stated that refrigeration had been the ruin of the British farmer, but, he added, it would also be his salvation if he adopted it. The claim was made, he said, by Americans that one of their States was the birthplace of the originator of cold storage, one Louis Contancion by name, of the city of St. Louis, but he preferred to think (and he certainly had some foundation for his belief) that the idea was first given to the world by an Englishman, and he no other than Lord Bacon, as it was stated in the life of that great man that on a journey from London to St. Albans in the depth of winter he alighted from his carriage and stuffed a fowl with snow; and, unfortunately, caught the severe cold which eventually brought about his death.

Continuing his remarks, Mr. White spoke of the effect of cold storage on prices generally in this country. Mutton, he reminded his hearers, could be had from 3d. to 4d. per lb. This, of course, meant that the working man consumes more meat now in one week than he did 30 years ago in a month. It came from all parts—New Zealand, Australia, the Plate, &c., and beef also from America and other places. Frozen poultry, too, had been shipped to London from the States and Canada in large quantities, particularly in 1897, when large quantities left over from the Chicago Exhibition were marketed in London. After the close of that Exhibition Mr. White was consulted by a merchant in New York who had gone in largely for frozen poultry for the Exhibition, and to his surprise was left with a large stock on his hands. Mr. White, at the request of this merchant, set about getting this surplus cold-stored, and notwithstanding the fact that the articles had been frozen for two or three years at a temperature of 20 degrees Fahr., samples were turned out in excellent condition after careful defrosting, and buyers were so favourably impressed that ready sales were found for the goods. Cold storage had enabled our kin in Australia to put their butter on the English markets in the winter months, which had lowered the prices of English, so that it did not pay farmers at home to do as they used to years ago, and it did not pay to feed cattle as before refrigeration was known.

Australian butter was sold here during January, February and March, at 1s. to 1s. 2d. per pound, whereas the home-made article (the finest grass butter, produced in July), having to be marketed as soon as made, only realised 7d. to 8½d. per pound. Mr. White stated that what was done with butter from Australia could be done with the English butter, provided the same means were employed, and this would then have the effect of regulating prices, which would be beneficial all round, say 9d. to 10d. in the summer months, and 1s. to 1s. 1d. in the winter.

Finally, the speaker dealt with the subject of the treatment of meat abroad, where it is immediately refrigerated as soon as the beast was killed, while in this country owing to lack of appliances, the beast killed in hot weather often turned green the next morning, and a lot of it had to be thrown away. Mr. White said he was glad to see the question of public slaughter-houses taken up, and he thought that if attached to these were cold stores, so that in case of the market being fully stocked at the time of killing, the meat could be placed in them to be brought out at a more favourable time, there would be a most beneficial effect. And allied to this was the question of finance. In America, when a man wanted money, he need not realise his stock at once, which would often mean sacrificing them in a bad market. All he had to do was to get his warrant from the cold store, take it to the bank, and get an advance of 50 per cent. to 75 per cent. on it. Not only was this done with meat, etc., in cold stores, but also with corn in the elevators. The charge made for storing in either cold stores or elevators was small.

A long discussion followed as to who should build these stores in England, in the course of which Mr. White suggested that in country places the landlords should interest themselves, and that capital could no doubt be had. So far as he was concerned, he had serious thoughts of getting someone to assist him in erecting a cold store in his immediate neighbourhood. He could see many things in this country which, could they only be held over at times for three or four weeks, would be doubled in value, whereas the large majority of the fruit-growers in England, having no place to store fruit in at all (and this applied to their other produce), were compelled to market them direct from the trees. If fruit could be stored, the season, instead of lasting only three or four weeks, might be prolonged to two or three months, and regular prices might be maintained. He mentioned the fact that in the United States it was possible for the public to get at Christmas the finest William pears, which were generally finished with in London in September, and that the pears now on the London market, which have been seen therein since last November, were all Californian. The French crop last year was a light one, and ended in November. The English crop was very bad indeed, and finished in September. That, however, was exceptional, more particularly now that the market gardeners are adopting the plan of washing their trees more.

THE NEW FOOD AND DRUGS BILL.

Proceedings in Grand Committee.

On April 20th, the Government's Food and Drugs Bill was considered by the House of Commons' Standing Committee on Trade. On clause 1, which lays down precautions against the importation of produce insufficiently marked, Mr. Strachey proposed to extend it to margarine coloured to imitate butter. Agriculturists, he declared, demanded the amendment, even at the risk of losing the Bill. He believed that the grocers were in its favour. Those of Manchester and Salford, for example, had issued a report asking for prohibition of the artificial colouring of margarine. Consumers, too, he felt sure, would be in favour of the amendment, because they were being continually cheated by the sale of margarine as butter. Sir C. Cameron, denied that the grocers were in favour of the amendment. Their federation, which covered all parts of the kingdom, had declared against hindrances to the colouring of foods. Mr. G. Whiteley held that margarine was not coloured to imitate butter. It was coloured to make it attractive and palatable. Prohibition of the process would entirely stop the sale of margarine for a time. Was the Committee prepared to take the responsibility of killing a legitimate and valuable trade, which was absolutely necessary to the working classes? He would strengthen the penalties

against fraud, and enact imprisonment for repeated offences—a subject on which he hoped the Government would make a statement—but he would not be a party to making the people's food dearer. Sir J. Leng agreed with Mr. Whiteley. Mr. Walter Long regretted that this very important question had been raised by an amendment which would simply cramp the operation of the clause. Apart from that objection, however, the view of the Government was that such a drastic step as one forbidding the colouring of margarine could not be justified. They noticed, however, a very general feeling in favour of more rigorous penalties for fraud, and they were prepared to strengthen the Bill in that direction, including imprisonment for repeated offences. The amendment would destroy for months a valuable and legitimate industry. The Government could be no party to such a proceeding; therefore he felt bound to say that if the amendment were carried it would be fatal to the Bill. Mr. Duckworth, resisting the amendment, regarded it as the result of a farmers' movement to stop the consumption of margarine, and so remove a rival of their butter. They, as well as other people, must submit to the competition, which they should meet by the aid of better methods of preparation and manufacture. He was glad that the Government meant to increase the penalties for fraud, the great majority of tradesmen being heartily desirous of seeing honest dealing become universal. Mr. Channing said the agriculturists would be deeply disappointed with the attitude of the Government. The colouring of margarine was a means of gross fraud, and its abolition was demanded by consumers as well as farmers. Mr. John Burns testified that the poor were often robbed by being supplied with margarine instead of butter. Though he was a free-trader, in favour of cheap food, he supported the amendment as pointing out the only practical way of differentiating between butter and margarine. Mr. Lambert hoped that on this point the Government would be defeated by two to one, as already happened to the Select Committee on the subject. Mr. Tomlinson meant to vote against the amendment because it would limit the operation of the clause. The amendment was negatived by 32 votes to 11. It was agreed that adulterated or impoverished cream as well as milk should come under the clause. Sir W. Houldsworth moved that consignments of separated or skimmed milk from abroad should be labelled with the words "from which the cream has been removed." It was, he urged, most important to consumers to know the exact value of the goods they bought. Mr. Long, though agreeing that there were reasons for the amendment, pointed out, on the other hand, that it would make more difficult the clear lettering which the Bill required in labels on imported goods, and on the whole he hoped it would not be pressed. The Amendment was withdrawn. Sir C. Cameron moved an amendment directly penalising the importation of food adulterated within the meaning of the existing Act (the Sale of Food and Drugs Act). Without this addition, he said, clause 1 would refer only to margarine, butter, and milk. He thought it should apply to everything that came from abroad. Mr. Walter Long opposed the amendment as calculated to impose on the Customs officials duties which they could not efficiently discharge. It would, besides, lead to increased expenditure. Much was said in the House about the necessity of economy, but in committee members always seemed willing to make proposals which would considerably add to the national expenditure. Mr. Duckworth urged the Government to re-consider their decision. Sir Charles Cameron declared that the Government reasons were flimsy and unsatisfactory. The right hon. gentleman seemed only to care for the interests of agriculturists. Mr. T. W. Russell said the object of the clause was to regularise what the Board of Agriculture had been doing. Mr. John Burns supported the amendment in order that those who manufactured dainty dishes for the aristocrats, and who would probably be driven out of London because of recent proceedings with regard to diseased meat, might not be able to set up business on the

Continent and freely send their poisonous stuff to this country. Sir W. H. Houldsworth urged the Government to accept the amendment as far as staple foods were concerned. They ought to have some consideration for the local authorities, the retail dealers, and the consumers. Mr. Long—We take powers under the other clauses. Sir W. H. Houldsworth remarked that these powers were similar to first allowing a horse to be stolen and then going after it. Mr. Long expressed his willingness to consider the addition of flour and lard to the clause. Mr. Austin and Mr. Davitt wanted bacon and hams included. Sir Charles Cameron could not accept the proposed compromise. He would accept an amendment which would make it the business of the customs, on representations being made by a department as to alleged importation of adulterated goods, to take samples. Mr. Tomlinson suggested that the Government should take a general power. Mr. Webster urged the Government to accept the amendment, and thus protect the honest English dealer. Mr. Duckworth and Mr. Ascroft also spoke in favour of the amendment. The amendment was rejected by 19 to 16. Captain Donelan proposed an amendment including within the clause "bacon or hams unless the package or covering is legibly branded with the name of the curer and the place of curing, or unless each side, half-side, or other cut of bacon and each ham is legibly skin-branded with the name of curer and place of curing, or which are saved or cured with boric acid, boracic acid, or borax, or other preservative in quantity injurious to health." He objected to American bacon and hams being cut and branded with English and Irish names. Mr. Long said that the copying of such names and cuts must be dealt with under the Merchandise Marks Act. As to the use of boracic acid, medical and scientific opinion was at present that it was not injurious to health. The President of the Local Government Board, however, had decided at once to appoint an expert committee to inquire into the whole question of preservatives, their use, and how far such use was injurious to human health. He hoped the amendment would not be pressed. The amendment was withdrawn.

At the adjourned meeting, on April 24th, it was arranged that Mr. Kearley's amendment to clause 1, imposing £5 penalty on anyone importing margarine, cheese, condensed milk, etc., insufficiently marked should be postponed until clause 14 was reached. Mr. Long accepted Mr. Kearley's amendment to sub-section 7 *re* "importer," which now stands thus: "Any person who shall, whether as owner, consignor, or consignee, agent, or broker, be in possession of or in any wise entitled to the custody and control of any of the aforesaid articles, and have a beneficial interest in any goods at and from the time of importation thereof until the same are duly delivered out of the hands of the Customs officers." This brings in the Customs Consolidation Act, 1876. Sir Charles Cameron's amendment to give the Local Government Board, as well as the Board of Agriculture, the right to act under sub-section 3, clause 1, was opposed by Mr. Long and Mr. T. W. Russell, and defeated. Mr. Long next stated that the Government intended to move a sub-section by which other articles of food are included. Mr. Strachey's amendment prohibiting the use of preservatives was opposed by Mr. Long, who declared this was not the time to debate the question, a committee of experts having been appointed. The amendment was defeated by 29 votes to 5. Mr. Strachey's next amendment demanding the disclosure of the preservative used in the amount per pound or gallon, was also rejected by 28 votes to 9.

ADULTERATION IN DERBYSHIRE.

MR. JOHN WHITE, F.I.C., the County Analyst, has issued his report upon the work done under the Sale of Food and Drugs Act in Derbyshire during the year 1898. The report contains several features of interest, and we find that whilst 1,009 samples were submitted to Mr. White for analysis only 63 were adulterated, a percentage

of 6.2. The previous year there were 1,004 samples, and as 69 were adulterated the percentage was 6.8. In 1896 the percentage was 7.5, in 1895 8.3, and in 1894 14.3. These figures Mr. White looks upon as being decidedly satisfactory. "Not only has the steady diminution in the percentage of adulteration which has proceeded since my appointment as your public analyst been maintained, but the results also compare favourably with those obtained in England and Wales. It is encouraging to find that the active way in which the provisions of the Sale of Food and Drugs Act are put into operation in the county is justified by the excellent results obtained. The importance of effective supervision of the food stuffs and drugs supplied to a community cannot be denied, and adequate protection of the customers can only be ensured by the frequent analysis of the various articles offered for sale." Legal proceedings were taken in a certain number of cases, the average fine (with costs) imposed being £1 7s. 4d. There does not appear to be much adulteration of milk in Derbyshire, which is a matter for congratulation, considering that the county is such a large and important milk-producing district.

Mr. White gives some valuable particulars in regard to certain cases of adulteration, a couple of which we may briefly mention. One sample of fresh butter submitted to him showed upon analysis the presence of 40 per cent. of foreign fat, and the fraud was rendered very serious by the fact that the mixture had been made up into round pats in exact imitation of fresh dairy butter. Enquiries showed that it was not the retail dealer but the farmer who was guilty of the fraud. Of 54 samples of tea submitted to Mr. White, no less than seven proved to be adulterated. Six of these were of the variety known as caper tea, and they contained small stones and sand in amounts varying from three to five per cent. The discovery of these samples, says the analyst, "shows either that the sophistication of tea is again developing, or that possibly some packages of spurious tea have in some way passed through the Customs." Out of 168 spirit samples submitted no fewer than 29 were adulterated, whilst five of 45 specimens of drugs failed to comply with the requirements of the British Pharmacopœia. In regard to the use of various chemicals—borax, boric acid, formic aldehyde, benzoic acid, and salicylic acid—as preservatives of food substances such as milk, butter, cream, condensed milk, jam, bacon, fish, bottled beers, wines, &c., Mr. Webb thinks it "a matter for legislation rather than litigation," and urges that "it should be an object for enquiry by the Government whether or not these preservatives are injurious to the health of the consumers." He further adds, "that the addition of preservatives to food is not absolutely necessary or essential is indicated by the fact that they are only found in a minority of the substances sold which are liable to decomposition, and that their use, to any extent, is of comparatively recent growth."

STANDARDS FOR DAIRY PRODUCTS.

IN some of the States of America, says the *Grocer*, an attempt has been made to define butter and set up standards for it. Ohio insists that butter shall contain 80 per cent. of fat; Oregon demands that there shall not be in it more than 14 per cent. of water. Columbia specifies 83 per cent. of fat with not over 12 per cent. of water or 5 per cent. of salt. Six States have attempted standards for cheese, the simplest being that of Ohio, which stipulates only for 20 per cent. of fat. In Minnesota it is required that 45 per cent. of the total solids shall be fat, and in Colorado 35 per cent. In Washington and California "full-cream" cheese must contain 30 per cent. of fat; "half-skimmed" cheese 15 per cent., whilst "skimmed" cheese is defined merely as made from skim-milk. The scale is complicated in Pennsylvania, where full-cream cheese must include 32 per cent. of fat, "three-fourths cream" 24 per cent., "one half-cream" 16 per cent., "one-fourth cream" 8 per cent., and "skimmed" below 8 per cent. of fat.

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Food and Sanitation.

SATURDAY, MAY 6, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

All communications for the Editor of "Food and Sanitation" must be addressed to

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TOMMY ATKINS AND HIS MILK.

TO anyone who knows how readily milk absorbs stench and how perfect a culture-bed it forms for disease germs, it will seem impossible that Mr. Powell Williams or any other civilised M.P. can be found

in the light of every-day knowledge defending so dangerous a practice as dairying on a sewage farm. It does not need a special inquiry by the Army Sanitary Committee or any other alleged experts to decide upon the Aldershot Sewage Farm's suitability as a dairy farm. No one but a born imbecile possessing a carefully cultured official ignorance would for a moment defend so dangerous and insanitary a practice, and the sooner Mr. Powell Williams and Lord Lansdowne ignore their alleged sanitary experts and follow common sense the better for their own reputations and the health of Tommy Atkins.

REVIEW.

ENGLISH & FOREIGN HEALTH RESORTS.

The Natural Waters of Harrogate.

AN excellent book which chemically, therapeutically, and clinically considers with reference to their application by drinking and bathing the natural waters of Harrogate has just been written by Dr. F. W. Smith, Harrogate. A series of analyses of the waters of six wells, sulphur, and chalybeate mostly in use for medicinal purposes in which the Kissingen spas are compared with Harrogate spas, greatly to the advantage of this native, clean, and hygienic health resort, forms a feature of the book. Mr. Charles F. Townsend, F.C.S., who has made these analyses, also compares the Harrogate waters with those of Shinzach, Eilsen, Aix la Chapelle, Weilbach, Aix les Baines, Baden, Homburg, &c., not unfavourably to Harrogate. The climate of Harrogate, its water supply, drainage, social advantages, &c., are well described by Dr. Smith, and the suitability of the waters for a number of diseases are considered, and points of treatment suggested. This valuable booklet will do something to direct attention to the advantages of our native health resorts. We cannot consider it as other than a national calamity that snobocracy follows our leaders of fashion, and flocks to disease-stricken continental resorts. As long ago as 1896 the British Consul at Madeira said: "I have no hesitation in saying that persons visiting Madeira run a very serious risk of infection; this is entirely due to the bad water supplied to the town." After speaking of the typhoid epidemic he goes on: "After much delay, the municipal authorities had the water from every fountain analysed. The result was somewhat alarming, as it was found that only one fountain in the town contained water fit for consumption." One well under the Government House, which supplied a large number of people with drinking water, was proved to be polluted by the sewage matter of two adjacent cesspools, which had not been cleared out for years!

Many of the towns in France are in a wretched sanitary condition.

Florence is a sanitary state which, if known, is not calculated to entice English visitors. People who can afford high-priced table waters do not suffer from typhoid fever, but the disease is ever rife in the poorer quarters.

Mentone, forty years ago, was a healthy village in France, where lived peasantry happy in their farms and their superb physical state, conditioned by the climate. It was discovered that the region was a most healing climate for consumptives, and it became the Mecca for the unfortunates of Europe so stricken. The inhabitants abandoned their farms to wait upon the strangers. The strong, healthy women forsook their dairies, and became the washerwomen of the consumptives' clothes. No precautions were taken; the disease was not then understood as now, the theory of the tubercle bacillus not having been discovered. The place to-day is bacillus-ridden, a pest-hole, death itself. The hitherto strong inhabitants are

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emaciated, a coughing, bleeding people, filled with the germs of consumption. The soil and the air are both contaminated with them.

It has always been a mystery to us why so many thousands of our wealthy people flock to filthy foreign "health," &c., resorts when England, Ireland, Scotland, Wales, the Isle of Man, and the Isle of Wight are really unknown to them. We have baths, natural mineral waters, enchanting scenery, excellent hotels and travelling accommodation in all parts of the kingdom. It would be worth the while of English medical men to study our native health resorts more and to encourage foreign ones less. Money spent in England goes to better England's prosperity, that spent abroad goes to equip an army or a navy that may one day be busy blockading or bombarding us, and the next be shooting us with the latest inventions in rifles bought by English money, foolishly spent.

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GILBEY'S WHISKEY.

At Mitchelson on April 24th, Sergeant Carroll, local inspector under the Food and Drugs Act, summoned Mrs. Mary Anne O'Riordan, licensed publican, Upper Cork Street, for having sold to him a quantity of whiskey which was not of the nature, substance, or quality demanded. Mr. James G. Skinner, solicitor, appeared for Mrs. O'Riordan. Sergeant Carroll stated that he went to the defendant's licensed shop in Upper Cork Street, and said he called to purchase a sample of the whiskey which the defendant sold. Witness pointed out a bottle of whiskey and said he would take what he wanted from that bottle. He took the usual samples from the bottle. Witness saw a glass of whiskey sold at that counter while he was present, and he believed it was sold out of the same bottle. He (Sergeant Carroll) forwarded a sample of the whiskey to the County Analyst, and the certificate of the analyst (Mr. O'Mahony) was to the effect that the sample was 39 degrees under proof. The Bench was aware that the utmost the law allowed was 25 degrees under proof. Mr. Skinner said that his client was perfectly prepared to meet the case. The bottle from which the sample was given to the sergeant was a bottle of whiskey bottled by the celebrated firm of Messrs. W. J. A. Gilbey. The label on the bottle gave the strength of the whiskey as 36 under proof. He would give evidence that the bottle from which the sample was purchased was not interfered with from the time it was bought by Mrs. O'Riordan until it was opened at the expressed wish of the sergeant. The responsibility therefore did not rest with the defendant.

Mr. Kilbride.—There is very little difference between the strength as ascertained by the analyst and the strength marked on Gilbey's bottle. Mr. John O'Riordan was then sworn and stated that he was the husband of the defendant. It was he gave the whiskey to the sergeant when he called. Witness had run short of whiskey, and purchased a bottle of Messrs. Gilbey's. The bottle from which the policeman was supplied was not interfered with after it had been purchased by witness, and the seal was not removed till the sergeant asked to be handed the bottle. The sergeant said he was not prepared to contradict that statement of O'Riordan's, but some one should be amenable to the law in the matter. He was under the impression that there was a little whiskey out of the bottle from which he was supplied, but he was not sure. He was also doubtful whether there was a label on the bottle. The witness (Mr. J. O'Riordan) produced a bottle bearing Gilbey's label, and stated it was from this bottle the sergeant was supplied. The bottle was marked that it contained whisky 36 under proof. Mr. Skinner contended that there was no case against his client, who was protected by the statement on the bottle from which Sergeant Carroll asked to be supplied with a sample for the purposes of analyses. His client sold the whiskey as it was received. Mr. Kilbride said the case was a very important one, and they postponed the further hearing of it till next court day.

WATER AT SPIRIT PRICES.

At Ironbridge, on April 25, William Williams, landlord of the Three Furnaces Inn, Madeley, was charged with selling a pint of Scotch whiskey 30 deg. below proof. Mr. Spender defended, and contended that the whiskey was sold as supplied. Defendant was fined 10s. and £1 11s. costs.—Alfred Jarvis, landlord of the Cape of Good Hope, Broseley, was charged with selling a pint of gin 43½ deg. below proof. Mr. Spender defended, and pleaded that defendant was not aware of it. Defendant was fined £2, including costs.—Elizabeth Millward, landlady of the Albion Inn, Broseley, was fined 10s. and £1 11s costs, for selling a pint of Irish whisky 36½ deg. below proof.

THOMAS DAVEY, landlord of the New Inn, Park Bottom, was charged by Superintendent Nercoe with selling whisky thirty degrees under proof and rum forty-four degrees under proof on February 14. He pleaded not guilty in each case, stating that he was away from home the day before the superintendent called, and did not know what was done.—The results of analyses having been produced, defendant was ordered to pay £1 8s. in respect of the whisky and £1 17s. 6d. for selling diluted rum.

BEFORE Mr. Sheriff Gillespie at Cupar April 27. Henry Robertson, publican, Colinsburgh, was charged with having on 21st March, sold whisky in which the spirit was reduced more than twenty-five degrees under proof—viz., 42.5 degrees under proof. A plea of guilty was tendered, and Mr. W. T. Ketchen, W.S., Methil, appeared on accused's behalf. Mr. Robertson and his wife, he said, had had a very serious attack of influenza, and finding themselves perfectly unable to attend to their duties they wrote to their daughter in Edinburgh to attend to the public-house. She added water to a bottle without knowing that it had been reduced already. This whisky, which was got by the inspector under the Food and Drugs Act, was known as shilling whisky or tramp whisky, and being sold at threepence a glass must be inferior whisky.

The Fiscal, while not wishing to unduly press the case, thought it right to mention that no less than six cases of this kind had happened in the same neighbourhood. The statute threw upon the Local Authority the burden of enforcing the Food and Drugs Act, and considerable expense was incurred in connection therewith. The expenses of each prosecution was two guineas.

His Lordship asked to hear the other cases before pronouncing sentence.

Mrs. Haggart, Balcarres Arms Hotel, Colinsburgh, was charged with having on 21st March sold whisky at 33.1 degrees under proof. She pleaded guilty, stating that her son who had just come from abroad brought up that whisky, and he must have made a mistake. She was laid up at the time.

Andrew Brown, Commercial Hotel, and Robert Brown, Loch Tavern, Kilconquhar, acknowledged having sold whisky 31.8 and 30.7 under proof respectively. Mr. Ketchen made a statement on their behalf, pointing out that the percentage under the legal maximum was very slight. The accused was not accustomed to the use of the hydrometer for testing the strength of spirits, but would now provide themselves with these instruments.

Geo. Gordon, Commercial Hotel, Upper Largo, admitted selling whisky at 27.7 degrees below proof. Mr. Robb Leven, appeared on his behalf. The whisky was sold at sixpence a gill, and accused was in the habit of giving a small drop of beer with it also.

The Sheriff, in passing sentence, said in these cases he had had occasion before to remark that he did not regard them of the same gravity as where deleterious ingredients had been put in. At the same time a person who bought whisky was entitled to get it, and he ought not by rights to pay the price of whisky for water—he could put water in afterwards. He imposed a fine of £2 10s. on Mrs. Haggart, £2 on Mr. Andrew Brown, and £1 10s. on Robert Brown. He had a good deal of difficulty in Mr. Robertson's case. It was a very flagrant discrepancy. The law made Robertson responsible for the act of his assistant, and he must impose a pretty substantial fine—£3. In the case of Mr. Gordon, he thought a small fine must be imposed. The risk lay with the license-holder to see that his spirits were above the proper standard, and his Lordship did not think he would be justified in imposing no fine at all—because twenty-seven degrees below proof was more than the Act of Parliament allowed. A fine of 10s. was imposed.

David Dalrymple, publican, Railway Inn, Lower Largo, pleaded not guilty to a charge of selling whisky 26 degrees under proof. The case was adjourned till 11th May.

COCOA AND STARCH.

At Aston, on April 24th, John A Edwards, 173, Park Lane, grocer, was fined 5s., for selling cocoa adulterated with 35 parts of sugar, and 20 parts of starch. The article was sold at 6d. per pound, defendant stating that he was not aware that it could not be sold as cocoa. It was really chocolate powder, and contained nothing deleterious. In reply to the magistrates, Mr. B Bolt (Inspector under the Food and Drugs Act), said he did not wish to press the case.

A NOTORIOUS MARGARINE MAN.

At Lambeth, on April 25, David Morgan, of Clapham-road, was summoned at the instance of the Camberwell Vestry for having, at premises in his occupation in Lordship-lane, East Dulwich, sold as butter a substance which was not of the nature and quality of the article demanded by the purchaser. There was a second summons against the defendant for exposing margarine for sale without having the same properly labelled as required by the Margarine Act. Mr. G. W. Marsden, solicitor to the vestry, appeared in support of the summonses; and Mr. Ricketts defended. On March 25 Inspector Collins, an officer of the vestry, caused a sample of "shilling butter" to be purchased at the defendant's shop in Lordship-lane. It was submitted to the public analyst, who certified it to consist of margarine. According to the evidence, the sample was served from an unlabelled tub, and in a plain wrapper. For the defence it was urged that the business

had been sold at the date the sample was taken, although the purchase had not actually been completed. It was further said that the defendant gave his assistants proper instructions as to the carrying out of the Margarine Act, and provided them with proper labels and wrappers. The defendant was before the Court on the 11th inst. on similar summonses taken out against him in respect of another shop of his, and was then ordered to pay a penalty of £50. Mr. Ricketts said that he could not help thinking that the present case ought to have then been mentioned to the magistrate, who would have probably thought that the very substantial penalty which he then imposed would be sufficient to cover this case also. Mr. Hopkins said it was pretty plain that the Camberwell Vestry were laying themselves out to shut up David Morgan, and to drive him and his fraudulent trading and dummy tenants and dummy managers, at all events, out of their district. He was happy to think that they were beginning to succeed. He was with Mr. Ricketts to this extent, that this summons was really in the pockets of the vestry at the time the last case was decided. He did not like to pile up summonses, and, therefore, he did not intend to press this case unduly. The defendant would have to pay a penalty of £10 and £3 5s. costs.

MARGARINE AS BUTTER.

At the Radcliffe Police Court on April 24th, a grocer named James O'Neill (executor of Francis O'Neill), 30, Blackburn Street, was fined £5 and costs for exposing for sale margarine which was not labelled according to the Act.

At Wigan, on April 24th, James Oliver, provision dealer, Wigan Market Hall, was summoned for selling adulterated butter. The Town Clerk prosecuted, and Mr. Rudd (Liverpool) defended. Inspector Sumner stated that he called at defendant's stall, and the assistant was standing at the counter. He asked the assistant to serve him with a pound of "that," pointing to a case. He was served with the article, which upon analysis was found to contain not more than 10 per cent of pure butter.—The defence urged that there was a label marked "margarine" on the top of this box, and before the sale was completed the inspector was told that it was margarine; also that he had only paid 6d. a pound for it.—The bench inflicted a fine of £15 and costs.

AARON BEMBRIDGE, grocer, of Price Street, Smethwick, was summoned on April 26th, for selling margarine as butter, whereas it only contained 22 per cent. of butter. Mr. Van Tromp asked for an adjournment *sine die*, as the case was assuming a more serious aspect, and it would probably be necessary to issue more summonses.—Mr. A. J. Glover, who defended, offered no objection, and the application was granted.

WM. M'DOWELL, grocer, 299, Breck Road, was summoned for having sold as butter a composition which was not of the nature and quality demanded by the buyer. A woman stated that on the 7th inst, she visited the defendant's shop, 299, Breck Road, and asked for a half-pound of 10d. butter, which she receive and paid for. She then handed it over to Inspector Quinton, who returned with her to the shop, and told the defendant that he intended to have the substance submitted to chemical analysis. The usual divisions were made, and a portion of the alleged butter was analysed, and the analyst's certificate stated that it consisted of 12 per cent. of water, and upwards of 65 per cent. of fats other than butter. Mr. Rudd, who appeared for the defendant, said it was a high-class mixture. Inspector Quinton admitted in reply to Mr. Rudd, that he had purchased real butter for 8d. per lb. Mr. Kinghorn, deputy stipendary: Then why not give genuine butter for 2d. more? If a man asks for butter, he ought to get it. Mr. Rudd: The defendant was wrong; there is no doubt that he has committed an offence. Mr. Pierce, who appeared for the Corporation,

informed the court that in January last the defendant was fined £3 for a similar offence, and 10/- for having sold margarine in an unlabelled wrapper. A fine of £5, with 17/6 costs, was now imposed.

ALICE RILEY, 188, Lodge Road, was summoned at Birmingham for selling margarine in an unlabelled wrapper. Defendant was represented by Mr. Frost, who stated that she bought the stuff as pure butter, and produced an invoice from the firm from whom she purchased it.—The case was dismissed.

JOHN, JAMES, and WILLIAM GRAHAM, trading as the "Provincial Pioneers," Birmingham, were summoned for exposing for sale a parcel of margarine without a label.—Inspector Jones stated that he went to the defendants' shop on the 7th inst., and saw a piece of butter marked "Sweet as the rose. The sort to buy." The inspector requested to be supplied with half-a-pound of that butter, but one of the defendants, who served him, while wrapping up the stuff, dropped it under the counter, and substituted another half-pound already wrapped up, which Jones believed had been "kept for the inspectors." Jones, however, was equal to the occasion, and refused to have the "inspectors' butter." He was eventually supplied with the sort he required, and the defendant told him it was margarine. The magistrates said it was one of the most impudent attempts to defraud ever brought before them, and fined the defendants £10 and costs.

COFFEE ADULTERATION.

At Smethwick, on April 26th, Arthur John Clarke, 8, Cape Hill, Smethwick, was summoned for selling coffee not of the nature and substance demanded, containing 74 per cent. of chicory.—Mr. Van Tromp (inspector under the Food and Drugs Act) explained that this was a serious case, as defendant was in a very large way of business, and the sample was taken from one of his branch shops. Another serious aspect of the case was that his assistant paid 1s. 8d. per lb. for the sample, whereas pure coffee could be purchased at 1s. 4d. On the day in question a Mrs. Bennet bought for him a quarter of pound of coffee, and on analysis it was found to contain 74 per cent. of chicory.—Evidence in support of this statement was given.—Defendant pleaded that the paper in which the coffee was wrapped did not specify what it contained. He took every precaution, but the canisters that day had got confused.—It was stated that defendant had been previously convicted in Birmingham for a similar offence.—A fine of £10 and costs was imposed (in all £11 2s.).

Some remarkable evidence was forthcoming in the case of Allen Rimell, grocer, of High Street, who was summoned for similar offence.—Mr. Van Tromp explained that a quarter of a pound of coffee was purchased at defendant's shop, for which 3d. was paid. In his report the Public Analyst remarked that his difficulty was not in finding the chicory, but the coffee, there being 95 per cent. of chicory.—Evidence having been given of the purchase, Mr. Glover, who defended, said that the defendant's wife served the assistant, and not having sufficient coffee she made it up with chicory in the presence of the customer. It was impossible to buy pure coffee at the price paid in that instance.—The Bench imposed a fine of £5 and costs (£6 2s. in all).

Thomas Molineux, 190, Lodge Road, Hockley, was fined 40s. and costs at Birmingham, on April 28th, for selling coffee containing 90 per cent. of chicory. He was defended by Mr. Philip Baker, who urged that the offence was committed through a mistake.—Mr. Ryland remarked that it was strange that mistakes should always be in favour of the seller instead of the purchaser.

A RAID ON BIRMINGHAM MILK PURVEYORS.

At Birmingham, on April 28, H. Jones, of Freasley Hall Farm, Wilnecote, near Tamworth, was summoned for delivering milk 20 per cent. short of fat. A sample was taken at New Street Station by Inspector Jones. Mr. Baker, for the defence, submitted that all milk was poor at this time of the year, and stated that his client had been in business for many years without any complaint being made as to the quality of his milk. The magistrates did not impute any intention of dishonesty against the defendant, but considered that he was responsible for the deficiency of fat, and fined him 40s. and costs.—Henry Knowles, Garrison Lane, was fined 40s. and costs for selling milk 24 per cent. deficient in fat.—Joseph Harris Stanley, Duddeston Mill Road, was fined a similar amount for selling milk containing 12 per cent. of added water and 9 per cent. of fat deficient.—William Gilbert Fowler, trading as Fowler Brothers, farmers, of Horsemarling Farm, Standish, near Stonehouse, were summoned for delivering milk 26 per cent. deficient in fat. The defendants did not appear. Inspector Jones took a sample from four churns at New Street Station. Mr. Jarvis (secretary of the Callow Park Dairy Company) stated that one of the defendants told him that the milk was poor owing to the bad feeding of the cattle. A fine of £10 and costs was imposed.

ANALYSTS DISAGREE IN A WORCESTER MILK PROSECUTION.

THE adjourned summons against Robert Jackson, farmer, of Tolladine Road, for selling adulterated milk, was before the Worcester Magistrates last week. Milk bought from Mr. Jackson was divided into three samples. On the certificate of Mr. Duncan, city analyst, that one portion was adulterated, Mr. Jackson was summoned. On the certificate of two other analysts that another portion was not adulterated, the Bench decided to send the third sample to Somerset House to get them to decide between the disputing analysts. Now a certificate was produced from Somerset House, agreeing with all the analysts in regard to the respective samples they analysed, and stating with regard to the third, that it contained no evidence of added water.

The Town Clerk (Mr. S. Southall), who appeared for the prosecution, said he was generally ready to press for a conviction, but he wished to show himself, when he thought it was not right to do so, as ready to adopt the opposite attitude. He could not ask for a conviction on this summons. They were quite prepared to admit that the defendant had not done wrong: but he maintained that the Somerset House analysis supported the conclusions of Mr. Duncan, though they did not explain the unexplainable differences.

Mr. Beauchamp, for the defence, thanked Mr. Southall for nothing, saying he could not have got a conviction, because a man could not be convicted until he had offended. But he argued that the Somerset House results did not bear out those of Mr. Duncan. He reminded the Court of the theory first offered for the defence, that Mr. Duncan mixed up a number of samples and analysed the wrong sample. He also took the care to rebut the suggestion by the prosecution that the sample analysed by Mr. Rose had been tampered with. He proceeded to argue how dangerous it was to institute proceedings under such conditions. It was not often the defendants had the courage to employ an independent analyst, but Mr. Jackson had the courage and the money. He argued that what he called the mistake of Mr. Duncan, was one for which the city ought to pay.

Mr. Duncan wished to give evidence of the scrupulous care of his methods.

The Bench said they were satisfied on that point. There was nothing for it but to dismiss the case. Mr.

Beauchamp's request for costs was only reasonable, and they made an order for £5 5s. costs. Mr. Webb remarking that Mr. Jackson had now a very splendid advertisement and certificate of the purity of his milk.

WARRANTIES WITH DRUGS.

At the Halifax West Riding Court on April 29th, a case of considerable interest to small grocers was heard. Joe. Dyson, grocer, Washer Lane, King Cross, was summoned for selling adulterated spirits of sweet nitre. Mr. F. D. Wardle, from the County Council solicitor's office, appeared for the prosecution, and the defendant was represented by Mr. K. W. Evans, and Mr. G. Parker held a watching brief on behalf of the wholesale druggists, a Blackburn firm. In opening the case, Mr. Wardle stated that no doubt the defendants would rely upon a warranty which they claimed to have received from the wholesale merchants. If the magistrates were satisfied that a warranty had been given with the goods, then the defendant was entitled to a dismissal, but the onus of proof remained entirely with the defendant. Inspector Crabtree said that he purchased three ounces of sweet nitre from the defendant on March 23rd, and the analyst stated that it contained 0.88 per cent. of nitrous ether, whereas the British Pharmacopœia put $1\frac{1}{2}$ per cent. down as the minimum. Mr. Evans stated the article was purchased last June, and the bottle was labelled "Pure sweet spirits of nitre," "warranted," and the invoice was marked B.P., which was taken to represent British Pharmacopœia, and therefore he contended that it was a sufficient protection for the retailer. He proceeded to quote a large number of cases, and Mr. Wardle replied that in the opinion of many the label was not sufficient warrant. The Bench decided the retailer had exercised all possible care, and that the label was a warranty sufficient to protect the defendant, and the case was dismissed.

THE NEW FOOD AND DRUGS BILL.

Proceedings in Grand Committee.

The House of Commons Standing Committee on Trade sat on April 27th, and proceeded with consideration of the Sale of Food and Drugs Bill. Mr. John Ellis was in the chair. The discussion was resumed upon Clause 2, which, as amended at the previous sitting, gives power to the Board of Agriculture or the Local Government Board to take samples of articles of agricultural produce for analysis. Some discussion arose on an amendment moved by Mr. Kearley providing that the officer procuring the sample shall divide it into four parts, dealing with three parts in the manner directed by section 14 of the Sale of Food and Drugs Act, 1875, as amended by this Bill, and sending the fourth part to the Board. Mr. Long said that though he thought the words of the clause would meet the hon. member's object, he had no objection to the amendment, and it was adopted.—Mr. Grant Lawson moved to omit the words providing that the fee for analysis shall be paid by the local authority of the place where the sample is procured.—Mr. Long said that the object of the Bill was to procure better administration. Was it reasonable to expect that if the local authorities were relieved of their work that object would be secured?—Mr. Lopes, Mr. Phillips, and Mr. Renshaw supported the amendment.—Mr. Jeffreys considered that this was a most legitimate charge to put upon them.—The Solicitor-General (Sir R. Finlay) thought that the committee would make a great mistake if they gave way to this appeal on behalf of the local ratepayer, for the reason that the Government department would only interfere where there had been inaction by the local authority, and if this fee were not payable by the local authorities they would try to throw the administration of the Bill on the Government.—Mr.

Kearley remarked that the agricultural interest called upon the Government to make these local authorities do their work, and they now jibbed, so as to speak, at paying for analysis.—After some further discussion, in which Mr. Hobhouse and Mr. Ashcroft took part, Mr. Long said that, as the responsible Minister in charge of the Bill, he could only say that if this amendment were carried the committee might just as well adjourn their proceedings and give no further attention to the Bill.—Sir W. Foster said that some confusion was caused by the fact that the Bill, instead of relying on the local authorities, introduced two Government departments. He thought the clause as it stood must be passed, but at the same time it would prove an irritating clause to the local authorities.—Mr. Grant Lawson, as a compromise, proposed words to provide that if it should appear from analysis that an offence against the Food and Drugs Act had been committed the local authority should pay the fee.—Mr. Long said that this was not a case in which he was prepared to compromise at all. He had stated with perfect frankness the view of the Government of the result of the adoption of this amendment. The issue was perfectly clear, and there could be no compromise whatever.—Mr. Grant Lawson said his right hon. friend had resisted the amendment very strongly, and he was afraid the Chancellor of the Exchequer would resist it still more in the House. He therefore asked leave to withdraw the amendment.—Leave, however, to withdraw the amendment was refused, and on a division it was rejected by 32 votes to eight.—Sub-section 2 of Clause 2 provides that the result of analysis may be communicated to the local authority, and that thereupon the local authority shall take proceedings as if they had themselves taken the analysis.—Captain Donelan moved to make it compulsory on the department taking the analysis to communicate the result to the local authority, and after a short discussion the amendment was agreed to.—Clause 2 as amended was ordered to stand part of the Bill.—On Clause 3, which gives the Local Government Board and the Board of Agriculture power to act in default of the local authority, on the motion of Sir C. Cameron, a subsection was agreed to declaring that it shall be the duty of local authorities to appoint a public analyst and to put in force from time to time as occasion may arise the powers with which they are invested, so as to provide proper securities for the sale of food and drugs in a pure and genuine condition, and in particular to direct their officers to take samples for analysis.—Sir C. Cameron moved an amendment providing that any public analyst appointed under the Sale of Food and Drugs Acts shall furnish such proof of competency as may from time to time be required by regulations which shall be framed by the Local Government Board.—Mr. Long said he was at one with the hon. gentleman in the object which he had in view, and he did not see how the amendment could be resisted after the committee had made the appointment of analysts compulsory.—Sir W. Foster thought that the work of the analysts would have greater weight if some scientific qualification were required of them.—The amendment was agreed to, and the clause as amended was ordered to stand part of the Bill.—On Clause 4, which gives power to the Board of Agriculture to make regulations as to the analysis of butter, milk, and cheese, Sir C. Cameron moved an amendment to provide that the Local Government Board, as well as the Board of Agriculture, should have this power. He said that the amendment raised a very important point—namely, which of these two bodies should appoint the committee of experts recommended by the Select Committee to whom should be remitted the duty of examining all questions connected with food and drugs with a view to fixing standards of analysis. He contended that the Local Government Board was the proper department to appoint this committee.—Mr. Long said this was a very important stage in the Bill. Hon. gentlemen who had made themselves acquainted with the report of the Select Committee would, he thought, agree that this particular question had been left in a very difficult position. The suggestion of the hon. baronet was

that the Local Government Board should be the controlling authority for the appointment of the committee of experts recommended by the Select Committee. He did not think it much mattered whether that actual duty rested with the one department or the other, because it was the practise of the departments of State to act in consonance; but the question raised was a much larger one. Under this clause the articles of food that would form the subject of inquiry were agricultural products, milk, butter, and cheese, and his department would be more likely to have practical experience and knowledge with regard to them than the Local Government Board. He presumed, however, that the Hon. Baronet contemplated the extension of the clause to other articles of food, and that was a proposition to which he must offer the most strenuous opposition of the Government. They had done their best to produce a clause which should at least approximate to the recommendation of the committee that this should be a committee of reference. The duty of that committee would be to determine as far as they could what deficiency of normal constituents or what addition of extraneous matter shall raise a presumption that milk, butter, or cheese is not genuine. In the earlier portion of the Bill it had been extended to certain other staple articles of food, and he would have no objection to a similar extension of this clause; but he should certainly resist any attempt to extend the clause beyond that and to introduce the Local Government Board for that purpose. The Select Committee in their report showed that there were doubts and difficulties in their minds on this question, and those doubts and difficulties were naturally present also in the minds of the Government. He hoped, therefore, the committee would regard this clause as an experiment.—The amendment was still under discussion when the committee adjourned.

On May 1st the Committee again met, and the discussion on an amendment to Clause 4 (power to the Board of Agriculture to make regulations as to analyses of milk, butter, or cheese), moved by Sir C. Cameron at the previous sitting, was continued. The amendment proposed that the Local Government Board should have the same power.—Sir C. Cameron said they were now asked to hand the whole matter over blindfold to the Board of Agriculture, which would fix standards solely in the interest of agriculture without reference to the interest of the consumer.—Mr. Long opposed the amendment, which was rejected by 40 votes to one.—On the motion of Mr. Strachey, it was agreed that cream should be included in the operation of the clause, and on the motion of Mr. Channing it was agreed that the Board of Agriculture should have power to make regulations concerning not only the genuineness of milk, cream, butter, and cheese, but also on the question whether they were injurious to health.—Captain Donelan moved an amendment providing that the Board of Agriculture for the purposes of the clause shall consult with representatives of the General Medical Council, the Associated Chambers of Commerce, and the Trustees of the Cork Butter Market.—Mr. Long said the clause only gave power to the Board to make regulations, and he had incidentally said that a committee would be appointed for that purpose. The intention of the Board was to appoint on that committee not only scientific representatives, but also people who would represent the producer and the consumer.—Mr. Burns strongly objected to either a grocer or a farmer who was interested in the sale of butter more or less adulterated—("No, no")—having a *locus standi* on the committee.—The Solicitor-General said the question was whether the Department should have power to make regulations with or without inquiry.—Mr. Kearley contended that no particular body had a right to be considered in this matter.—Mr. Heywood Johnstone thought it was very desirable that the Board should have a free hand, but would be glad to know whether the regulations would be fixed for all time.—Mr. Long said that not only would the regulations be liable to review from time to time, but it would probably be necessary to appoint different committees to deal

with different products.—After further discussion the amendment was, by leave, withdrawn.—A sub-section proposed by Mr. Kearley was agreed to, to the effect that any regulations made under the section shall be notified in the *London Gazette* and made known in such other manner as the Local Government Board may direct, and the clause as amended was ordered to stand part of the Bill, as also was Clause 5.—On Clause 6, which deals with the marking of margarine and margarine-cheese, Mr. Long moved that "where, under this Act or the Margarine Act, 1887, it is required that any package containing margarine or margarine-cheese shall be branded or marked, the brand or mark shall be on the package itself, and not solely on a label, ticket, or other thing attached thereto." The amendment was agreed to.—Mr. Kearley moved an amendment to provide that the letters on the paper wrapper in which the margarine or margarine-cheese is sold should be capital black letters.—The Solicitor-General thought this was hardly necessary. All that was required was that the letters should be clearly legible.—Mr. Jeffreys having supported the amendment, Mr. Long suggested that it would rather weaken the clause if it was limited in this way. If the committee, however, were in favour of the amendment he should not object to it. The amendment was agreed to, and a further amendment moved by Mr. Kearley to provide that the letters on the label should be half an inch square instead of half an inch long, as proposed in the Bill was rejected on a division by 23 votes to 9.—Mr. Strachey moved that the wrapper required should be an uncoloured wrapper.—Mr. Long said he hoped the committee would not waste time by discussing these infinitesimal points. He thought they might be content with the section as it stood. (Hear, hear.) The amendment was negatived, and the clause was ordered to stand part of the Bill.—On Clause 7, which makes provisions as to manufacturers of and dealers in margarine and margarine-cheese, Sir C. Cameron moved to omit sub-section 1, which provides that every manufacturer and wholesale dealer shall keep a register showing the quantity and destination of each consignment sent out, and that such register shall be open to the inspection of any officer of the Board of Agriculture.—Mr. Long said that in many cases the powers given by this clause had been welcomed by manufacturers, because they would afford *prima facie* evidence of the *bona fides* of the manner in which their work was carried on. If, however, as had been suggested, the clause as drawn affected the home producer injuriously as compared with the importer, he would bring up words on report to rectify it. The amendment was withdrawn.—Mr. Hobhouse moved as a new sub-section that any officer of the Board of Agriculture shall have power to enter at all reasonable times any manufactory and inspect any process of manufacture therein, and take samples for analysis.—Mr. Long submitted that the question the committee had to decide was whether these powers were necessary in order to prevent fraudulent sales of an article.—Mr. Kearley supported the amendment, but Mr. G. Whiteley, in opposing it, said it would inflict a great hardship on the manufacturer.—Mr. Jeffreys denied that any hardship would be inflicted on the manufacturers by the adoption of this amendment.—Mr. Grant Lewis dwelt on the desirability of getting at the wholesale manufacturer under the Bill, and argued that the amendment was necessary for that purpose.—The Solicitor-General said that the principle for which hon. members were contending really applied to all manufacturers, and he thought that if this amendment were carried with regard to margarine it would only be fair to apply it to other manufacturers.—Mr. Long said that if the amendment were carried the Government could adopt only one of two courses—either make the principle of the amendment generally applicable, or resist it downstairs with all the force they could bring to bear.—Mr. Hobhouse did not think he would be justified in withdrawing the clause, and if the Government succeeded in defeating him they must take the responsibility.—The committee

divided, and the amendment was carried against the Government by 21 votes to 17. An amendment moved by Mr. Phillips, increasing the *maximum* fine for a first offence under the section from £10 to £20, was also carried on a division by 26 votes to 9.

MILK DEALERS AND THE FOOD AND DRUGS ACT.

At a Parliamentary Committee Meeting of the Manchester, Salford, and Surrounding Townships Milk Dealers' Protection Society it was resolved that the following letter, together with suggested amendments of Section 3 of the Sale of Food and Drugs Act Amendment Act, 1879, be sent to the Manchester and Salford members of Parliament and to M.P.'s of the various towns surrounding Manchester:—

"Dear Sir,—I am instructed by my committee to forward you a copy of the suggested amendments we are anxious to get inserted in the Government Sale of Food and Drugs Act now before Parliament. Should the Act pass the penalties that will be inflicted upon a milk dealer in whose possession adulterated milk may be found, although innocent, will be very severe; so that every opportunity should be given him in order to prove his innocence. Hoping you will give this matter your serious consideration and use your influence in order to get the words within quotation marks inserted in the Act. Our object in seeking to alter this clause is to give local authorities power to take samples of milk at the place of delivery, whether in or out of their jurisdiction. We have several railway stations in Manchester and Salford where our inspectors cannot take samples of suspected milk. If the inspector could follow the milk up to its source each case would be in the hands of one authority, and each sample of the milk would be analysed by one analyst, a most important consideration.—I am, sir, yours respectfully,

"W. OWEN, Secretary."

Section 3.—Any medical officer of health, inspector of nuisances, or inspector of weights and measures, or any inspector of a market, or any police constable under the direction and at the cost of the local authority appointing such officer, inspector, or constable, or charged with the execution of this Act, may procure at the place of delivery, "whether in or out of the jurisdiction of the local authority appointing such officer, inspector, or constable," any sample of any milk in course of delivery to the purchaser or consignee in pursuance of any contract for the sale to such purchaser or consignee of such milk, and such officer, inspector, or constable, if he suspect the same to have been sold contrary to any of the provisions of the principal Act shall submit the same to be analysed "by the analyst of the local authority appointing such officer, and proceedings shall be taken and penalties on conviction be enforced in like manner in all respects as if such officer, inspector, or constable had purchased the same from the seller or consignee under Section 13 of the principal Act."

THE OPERATION OF FOOD AND DRUGS ACT IN GLASGOW.

An official return to the Local Government Board of the work done for the year 1898 by the Sanitary Department of the Health Committee of the city under these Acts has just been forwarded to Edinburgh by Mr. Lindsay, police clerk, who acts as prosecutor and law agent for that department. It shows that there are four inspectors working under the chief sanitary inspector, and that during the year 1898 they procured for analyses 370 samples of food and drugs; that of those 309 were certi-

fied by the public analyst to be pure, and the remaining 61 to be adulterated. The 61 cases of adulteration were made up thus:—41 of sweet milk, 9 of skim milk, 9 of butter, 1 of coffee, and 1 of compound drugs. The case of compounded drugs was not prosecuted, it being impossible to prove the standard of compounded medicine, but the remaining 60 cases, together with 14 cases for contravention of the Margarine Act, making a total of 74 cases, were prosecuted before the Sheriff, with the result that convictions were obtained in the whole of the 74 cases, and fines imposed on and paid by the defenders. The total of the fines amounted to £344 7s. 10d., which, being payable to the treasurer, went to the reduction of the police rates of the city.

ANTISEPTICS IN FOOD.

At a meeting of the Incorporated Society of Medical Officers of Health, held at the offices of the Board of Works for the St. Giles District, on April 14, a paper on the subject of preservatives or antiseptics in food was read by Dr. Alfred Hill, the Medical Officer of Health and Public Analyst for the City of Birmingham. A discussion ensued, in which a number of Medical Officers of Health and Public Analysts took part, and ultimately the following resolutions were adopted:—

(1) That the Incorporated Society of Medical Officers of Health strongly disapproves of the practice of adding preservative chemicals to milk and other foods.

(2) That if preservative chemicals are added to any food a full disclosure as to the nature and amount thereof should be made to the purchaser.

MUNICIPAL CORPORATIONS AND TUBERCULOSIS.

THE clauses relating to tuberculosis and the milk supply which will be substituted for those originally proposed by the Corporations of Blackpool, Bootle, Darwen, Derby, Leeds, Manchester, Salford, and Stockport have now been practically settled. The revised clauses are ten in number, and the following is a brief summary of their provisions: Clause 1 deals with the interpretations of terms. Clause 2 imposes a maximum penalty of £10 for the sale knowingly of milk from tuberculosis of the udder. Clause 3 imposes a maximum penalty of £5 upon a dairyman who knowingly keeps a cow with a tuberculosis udder with other cows in milk. Clause 4 renders it obligatory to notify to the medical officer of health, cases of cows affected with, or suspected of, or exhibiting signs of tuberculosis of the udder, and imposes a maximum penalty of 40s. for failure to do so. Clause 5 gives power to medical officers of health to take samples of milk within the borough, and without the borough, subject to the authority of an order of a justice having jurisdiction in the place where the dairy is situate. Clause 6 provides for the inspection of dairies within the borough by the medical officer of health, accompanied by a veterinary surgeon, whose report, with that of the medical officer, must be furnished to the Corporation, and it empowers the Corporation, in cases where it is believed that the milk is likely to cause tuberculosis in persons in the borough, to suspend the milk supply of any particular dairyman on his failure to show cause to the contrary. The like provisions extend to dairies outside the borough, subject to the order of a justice having jurisdiction in the place where the dairy is situate, authorising inspection. The maximum penalties for offences under this clause are £5, and 40s. for every day during which the offence continues. Clause 7 provides for public notice of the Act coming into operation. Clause 8 makes penalties recoverable before a petty

sessional court having jurisdiction in the place where the dairy is situated, or where the offence is committed. Clause 9 deals with the expenses incurred in the execution of the Act, and permits the application of the tuberculin or other reasonable test, subject to the previous consent of the owner. Clause 10 allows the Act to be executed by a committee of the Corporation, such committee to consist wholly of members of the Council.

DURHAM AND THE FOOD ACT.

Reply of the Mayor to Canon Greenwell.

A SPECIAL meeting of the members of the Durham Town Council was held on April 25, in the Council Chamber, under the presidency of the Mayor (Councillor W. Gray).

The Mayor said that probably the members had seen the report which appeared in all the northern newspapers as to certain remarks made by the Chairman of the Durham County Bench of Magistrates as to the administration of the Food and Drugs Act in the city of Durham. The subject came before the Watch Committee, and their inspector under the Food and Drugs Act presented a report, which he would ask the Town Clerk to read.

Head-Constable Smith's report stated that during the last four years he had obtained 63 samples, being an average of one sample per 943 inhabitants. In five cases (one of milk), it was necessary to take proceedings, convictions following. The Local Government Board considered the analysis of one sample for every 1,000 inhabitants to be evidence of satisfactory administration.

The Mayor, after the Town Clerk had read Canon Greenwell's remarks, said he was sorry that such an old citizen as Canon Greenwell should have made such a grave charge against that Corporation without having made due inquiry as to the facts of the case. They would see by the report which had been presented to them that Durham came out much better than other parts of the County. Of course these remarks would reach Canon Greenwell's ears, and it would be for him to deny the facts. Their inspector had taken the figures he had given from the County Council inspector's own report, so that he thought Mr. Scott Elder would be satisfied from his own report that they were a "lively" Town Council in carrying out the Act. He thought Canon Greenwell's remarks were a very serious reflection upon them as a Corporation. It was not for him (the Mayor) to advise Canon Greenwell, who was a gentleman of considerable learning, but he thought it was only right for any gentleman before attempting to bring charges against a body like that to look into the facts beforehand. He moved:—"That it is the opinion of this meeting of the Durham Corporation that the Food and Drugs Act is properly carried out by this Council in the City of Durham."—Councillor James Tood seconded the motion, which was carried unanimously.

ADULTERATION OF LINSEED OIL.

THE Des Moines *Leader* of recent date says: "The chemist of the State board of health, Professor Macy, of Highland Park College, will begin his big task of analyzing 200 samples of alleged linseed oils at once. They have been secured by the board, with the assistance of the oil inspectors. More samples are coming in constantly, and the examination is to be made as complete as possible. Complaint has been heard in all quarters of the poor quality of paints sold. The trouble is attributed to the oils. Pure linseed oil is necessary to make the best paint. A small adulteration can be allowed without injuring the paint seriously. But the paints made with many oils sold as pure linseed are worthless. They peel off in a few weeks and give no protection whatever from the weather."

ADULTERATION OF SARSAPARILLA.

C. HARTWICH, at the seventieth meeting of the German Naturalists and Physicians (*Pharmaceutische Zeitung*), reports a new adulteration of a sarsaparilla. It resembles the real article in both external appearance and anatomical structure, differing from the genuine in the absence of starch and calcium oxalate. In place of the starch, sugar is found. The root comes from the Amazon valley and is probably a member of the Liliaceae.

LEGISLATION FOR SPECIAL SHAPED POISON BOTTLES.

A BILL has passed the New York Legislature providing that no druggist can legally sell any poison or medical preparations containing poison unless it be contained in a vial or bottle, octagonal in shape, with serrated edges, and having impressed on it the emblem of a skull and cross bones. A violation of the act is made a misdemeanor. The passage of this bill caused consternation in the drug trade of the Empire State. It is said to be part of a scheme to require all the druggists in the State to buy a medicine bottle, the design of which has been patented by certain parties with legislative "pulls." This medicine bottle design exactly fits the language of the bill. No one else can make it, so that the company possessing the patent will have a profitable monopoly if the bill becomes law. Governor Roosevelt has been asked to veto the measure. The drug trade is fighting similar bills introduced into other legislatures.

HOW ADVERTISING QUACKS ARE PUNISHED IN GERMANY.

RECENTLY a Hamburg tradesman advertised an "infallible grease-eraser." Nine of his competitors lodged a complaint against him, alleging unfair competition, on the ground that his eraser was not infallible. The judge appointed an expert to make grease-stains on garments and other fabrics, and then ordered the defendant to remove these stains, in court, with his eraser. The eraser proved unequal to the task, and the advertiser was fined 100 m. and costs.

NEW MEATS.

EPICURES often complain, says *The Globe*, of the lack of variety in the meats upon which the civilised world subsists. For many centuries we have rung the changes upon beef and mutton, and even our great-grandfathers were tired of them. It seems, however, that relief may come from the West. There, although the bison in his wild state fights vainly against the doom of extinction, in captivity he is multiplying. Two years ago there were said to be only 600 tame American bison; but as one well-known herd has since then doubled its numbers, the total now runs probably well into four figures; and it is believed that by careful breeding and feeding bison beef may become a valuable article of food. Elk, also, and various kinds of deer are attracting the attention of farmers and others in North America as a probable source of profit. They can be reared in captivity almost as successfully as sheep or cattle, and in some respects are more easily fed. At present, and perhaps for a few years to come, prices will be too high for the use of these animals for food; but the limit to the demand for parks and zoological gardens will soon be reached, and then the farmers look forward to supplying the meat market. Perhaps there may be money in it for the English farmer also. We can have no idea, until the experiment has been fairly tried, to what pitch of excellence the beef or venison of carefully-bred, reared, and stall-fed bison or deer may not be brought. If we could be confronted to-day by a joint of the first sheep used as food by man we should probably find it like tough and rank goat's flesh.

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Food and Sanitation.

SATURDAY, MAY 13, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

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LONDON, E.C.

THE HOUSE OF COMMONS AND THE SALE OF MARGARINE.

THE Standing Committee on Trade of the House of Commons spent many hours last week in debating the question whether the butter-fat allowed in margarine should be 6 per cent. or 10 per cent., and as

Mr. Long, on behalf of the Government, opposed the smaller figure the 10 per cent. was ultimately agreed to. It is such discussions as these which make the House of Commons supremely ridiculous, and demonstrate the colossal ignorance of our legislators. The Grand Committee might just as well have spent its time considering the problem of how to extract sunbeams from cucumbers. It is all very well to fix 10 per cent. of butter-fat as the limit allowed in margarine, but who is to determine that the manufacturer has added that amount? *There is not an analyst in the world who could honestly declare from an analysis made that any sample submitted to him contained only 3, 5, 6, 10, 11, or 12 per cent. of butter-fat.*

The 10 per cent. butter-fat clause is, therefore, very interesting as a specimen of House of Commons folly, but it is absurd and useless, and will not stop frauds. It is not necessary now to discuss the question of the relative merits of margarine and butter as every investigator knows that well-made margarine is purer, healthier, and cheaper, and bulk for bulk is preferable to butter. Let anyone who doubts this examine the conditions under which dairying is too often carried on, and note the liability to infection by butter made from milk and the absence of it in butter made from the same animal's fat; for after all there is scant difference in the animal fat, as secreted in the milk and made into butter, and the animal fat stored up in the animal itself and made into butter—now called margarine. What difference exists is in favour of the latter, as being less liable to contamination or to convey disease. Margarine can therefore well afford to stand on its own merits, and this is what the best manufacturers and traders want. Agriculturists may as well cry for the moon as ask for the suppression of the sale of margarine, or endeavour to prevent the admixture of butter-fat with it in small percentages. The only feasible and practical way of ensuring margarine being sold as such is to enact that it be sold only in special block-shaped packages of $\frac{1}{4}$ lb., $\frac{1}{2}$ lb., 1 lb., and 2 lbs. weight, legibly marked "margarine." The public would then be protected from fraud, and buy genuine margarine cheaper than at present. Those who believe butter to be much superior could indulge their fancy and also get the genuine article.

Perhaps a little common sense may dawn on the members of the House of Commons when the Bill returns from Grand Committee. If the Bill be passed as it now stands it will afford glorious opportunities for "expert" scientific wrangling and heavily "feed" lying, but how this interesting scientific humbug will benefit traders or the public we fail to see. One thing is certain—it will place retailers in a position a hundredfold worse than that they now occupy, as they will have to pay the piper, and it will not benefit the public one jot.

PRESERVATIVES IN FOOD V. COLD STORAGE.

WE object to the addition of preservatives in foods not merely on account of their possible or actual harmful-

ness, but because we hold it is an offence against the citizen that he should be drugged without his knowledge by any ignorant person who chooses to dose milk, butter, bacon, meat, fish, &c., with boracic, salicylic, sodium fluoride, &c. There is no honest excuse for such tampering with foods. They are intended to deceive the nose, which is Nature's vedetta, warning the consumer against that which is tainted and may be dangerous to health. To the argument that without the use of preservatives tons of valuable food would be wasted, we have to answer that there is no reason whatever to waste food. Nature has shown us that in the Arctic regions it is easy to preserve food indefinitely by a process which adds no drugs and effects no change. We mean by intense cold. So blind, however, are we to Nature's teaching that although her book has lain open for mankind's perusal since the beginning of the world, we still in times of glut consign tons of fish to the field as manure, and destroy tons of meat, fruit, milk, &c.

It is true that we are making considerable progress towards stopping this enormous waste of wholesome food, and that cold storage is becoming more general, but this important process is yet in its infancy. Our able contemporary, *Cold Storage*, has done a great deal to advance the rational and healthy method of food preservation as opposed to the dangerous one of adding drugs to foods, and its pages record a gratifying increase in the number of towns and institutions where refrigeration is in use, but we should not be content until every town of any importance in the kingdom had a proper cold storage apparatus and premises wherein butchers, milk vendors, fruiterers, fishmongers, &c., could deposit their supplies at reasonable rates and use it as required. The saving in food would be enormous, and the baneful practice of the surreptitious drugging of foods be without even the one excuse it now possesses.

A MILK APPEAL.

Cave v. Bennett.

In the Queen's Bench Division on May 1st, before Mr. Justice Darling and Mr. Justice Channell. This was an appeal by an Inspector under the Food and Drugs Act against a refusal of the Tunbridge Wells Justices to convict the respondent upon a charge of selling milk which had according to the analyst's report, been adulterated with ten per cent. of added water, on the ground that the dry season accounted for the condition of the milk.—Mr. Hohler appeared for the Appellant, and Mr. Thorn Drury for the Respondent.

Mr. Justice Darling, without calling upon the latter, said he thought that what the Magistrates intended to find was that, although the analyst said that there was ten per cent. of added water in the milk, he did not satisfy them that there was ten per cent. of added water, and they were satisfied that the condition of the milk was due to the dryness of the season, while the analyst wrongly attributed it to added water. Such a finding of fact was warranted by the evidence, and the appeal must, therefore, be dismissed.

Mr. Justice Channell concurred.

Appeal accordingly dismissed with costs.

A SWEET NITRE PROSECUTION.

At the Leeds West Riding Police Court, on May 2nd, two prosecutions at the instance of the West Riding County Council, and of importance to small shopkeepers, were heard. The defendant in the first case was Caroline Vickers, grocer, Kippax, and she was summoned for selling sweet spirits of nitre below the standard of the British Pharmacopoea. Mr. Wardle conducted the prosecution, and Mr. H. Wilson, food and drugs inspector, proved the cases. According to the analyst's certificate, the sample taken from the defendant only contained 1.13 per cent. of nitrous ether, whereas the minimum allowed was 1.75 per cent. The defence was that Mrs. Vickers purchased the nitre in the same state as she sold it. Mr. G. S. Brownhill, wholesale druggist, from whom the defendant purchased the nitre, said it was an article which rapidly evaporated, and he was not surprised at the depreciation.—Mr. Melmore, laboratory manager for Messrs. Bleasdale, Limited, of York, the makers of the nitre, gave similar evidence, and said that the only mistake which the defendant had made was in not purchasing the nitre in smaller quantities. On account of its volatile nature their firm never stocked nitre.—The Chairman said that the Bench believed the defendant acted in ignorance, and they only ordered her to pay the costs. The County Council, he added, would have served their purpose by drawing the attention of small shopkeepers to the fact that articles of that nature must be kept up to the chemical standard.—The second case was of a similar nature, the defendant, Samuel Sharper, also a Kippax grocer, having sold to the inspector sweet nitre containing only 1.03 per cent. of nitrous ether.—Defendant said that he had only been in the business five months.—The Chairman: You had better get out unless you understand it better (laughter).—The Bench ordered the defendant to pay the costs.—Sharper: I shan't sell it any more (laughter).

SOMERSET HOUSE AGREES WITH ANOTHER ANALYST.

At Cork, on May 3rd, Miss Ronayne, Mr. Nicholas Healey, and Mrs. Buckley, were charged with supplying milk deficient in fat. The cases stood adjourned from the 10th ult. for a certificate of analysis from Somerset House. The Cork City Analyst stated in his certificate that the deficiency in fat in the milk supplied by Miss Ronayne and Mr. Healy was caused by either skimming the milk or mixing skimmed milk with it, and that the deficiency in the milk supplied by Mrs. Buckley was caused by adding water to it. The defendants took exception to the certificate of the Cork analyst, and requested that samples of milk should be sent to Somerset House for analysis, which was accordingly done. The certificate of the Somerset House analyst was produced yesterday. The certificate stated that the milk supplied by Miss Ronayne and Mr. Healy was six per cent. deficient in fat in the limit of three, but, it added, cases similar to the above have been ascertained in genuine milk. In the case of Mrs. Buckley, the analyst stated they were unable to detect water in the sample. This was owing to the length of time which elapsed since the sample was sent, and the fatty solids having become degenerate. Miss Ronayne and Mr. Healy were fined 13s. and 22s. 11d. costs each, and the case against Mrs. Buckley was dismissed.

CONFECTIONERS AND ROTTEN CONDENSED MILK.

SUMMONSES against Socherki and Israel Harris, of 289, City Road, for depositing at that address, on May 2nd, 506 tins of condensed milk, which was unsound and unfit for the food of man, were heard at Clerkenwell on April 4th.

Sanitary Inspector Martin, of the St. Luke's Vestry, said the defendants carried on a large business as pastry-cooks and confectioners. Socherki Harris told him that the milk was intended to be taken away by the dustman, and that he bought it from a baker last Christmas, but did not explain why he had kept it so long. Some of the tins were opened and partly emptied.

Dr. Thomas, the Limehouse Medical Officer, who accompanied the inspector on the occasion of the seizure, said the milk was unfit in any form. Some of the tins were actually burst by the decomposition of the milk.

For the defence, it was set up that this milk was bought with the business generally of a confectioner who had failed in January. The milk was found bad, and put on one side and overlooked. Meanwhile good milk was bought and used. The tins partly used had been opened by the workmen for their tea.

Mr. Bros imposed a penalty of £50 upon Socherki, and discharged Israel, against whom no evidence was given.

It is greatly to be regretted that Socherki was not sent to prison and given the rotten condensed milk as food during his incarceration. But ought not the wholesale condensed milk firms who sell this rotten stuff, also be put on trial?

WATER AT SPIRIT PRICE.

At the Shire Hall, Nottingham, on May 3rd, Samuel Flint, licensed victualler, of Arnold, was summoned for selling spirits which were unduly adulterated. Mr. C. E. W. Lucas defended. Colonel Story, Inspector of Weights and Measures under the County Council, deposed that on April 6th he went into the house of the defendant and asked for a quartern of whiskey. He was served, and he informed the defendant as to the purpose for which he required the whiskey. The analyst's report with regard to the whiskey was that there were 11 parts more of added water than was allowed by the Act of Parliament. Mr. Lucas said the defendant had occupied the house for four years, and had never had any complaint against him. The real fact was that the whiskey had become cloudy because of new pipes being put in, and defendant was really selling special whiskey instead of the ordinary whiskey, but at the ordinary price. Defendant and his wife gave evidence bearing out Mr. Lucas's statement, but after hearing further evidence the Bench imposed a fine of two guineas.

At the Summons Court, Nottingham, on May 5th, Louisa Spencer, of the Horse and Trumpeter Inn, Beck Street, was summoned for selling one pint of adulterated whiskey on March 21st. Mr. Ward, Inspector of Nuisances in the city of Nottingham, called upon the defendant and asked for a pint of Scotch Whiskey, for which he paid 2s. 6d. He then informed Mrs. Spencer that he was an inspector of nuisances, and had purchased the whiskey for the purpose of analysis. The defendant then said, "Oh, you should have asked for best whiskey"—(Laughter). The whiskey was submitted to Mr. Trotman, the City Analyst. The law allows whiskey to be reduced 25 per cent. below proof, but this whiskey was 17 per cent. beyond that. For the defence, Mr. Williams and Mrs. Spencer did not deny that the whiskey was adulterated, but there was no intentional fraud. Through carelessness she had failed to use the proper test for the whiskey. The Bench inflicted a fine of 40s., or in default 14 days.

ADULTERATED TREACLE.

At Stafford, on May 5th, Grace Wright, grocer, of Lovatt Street, was charged with selling a pound of treacle which was not of the nature, substance, and quality demanded by the purchaser. Mr. E. W. H. Knight, inspector under the Food and Drugs Act for North

Staffordshire, appeared to prosecute, and Mr. A. Wilson (Messrs. Wilson and Cowie), of Liverpool, appeared for the defence on behalf of Messrs. Crossfield, Barrow, and Co., sugar refiners, of Liverpool. Mr. Knight, stated that the prosecution was instituted under Section 6 of the Food and Drugs Act, 1878. The facts of the case were that on February 9th the treacle was supplied to a Mrs. Whitfield in a tin which bore a label stating that the contents were made from pure cane sugar. Upon being analysed the sample was found to contain 57 per cent. of glucose syrup. Evidence as to the purchase of the treacle was given by Samuel Bennison, assistant to Mr. Knight, who instructed Mrs. Whitfield to enter the shop for the purpose. Martha Gammage, servant to defendant, gave corroborative evidence. Mr. E. W. T. Jones, county analyst, certified that the sample in question submitted to him contained 57 per cent. of glucose syrup. The present prosecutions were only recently instituted, and it came as a surprise to him that treacle was worthy of the adulterator's art. He confessed that he had to seek information from the manufacturers who were represented that day, not knowing that they were interested in the proceedings which were now being taken. (Laughter.) Mr. Wilson, in defence, said that up to the end of last year there was a certain percentage of added glucose in all manufactured syrup, and it was not thought wrong to make the addition because it was done for the purpose of keeping the syrup from solidifying. When the prosecutions were commenced, however, his clients (Messrs. Crossfield) took upon themselves the entire responsibility as they were doing in the present instance, and sent to their customers labels to be affixed to the tins of treacle, certifying that there was an added percentage of glucose. He submitted that the sale in the present case was not to the prejudice of the customer because as a matter of fact she obtained a better article than she asked for, being supplied with syrup instead of treacle. Mr. Shallcross said that as this was the first case of the kind, the Bench would impose a fine of £1 and costs.—David Russell, of Lovatt Street; J. B. Goodall, of Greengate Street; and Edward Tee, of 46, North Street, were similarly charged. Mr. P. Burke appeared on behalf of Messrs. Macfie and Sons, of Liverpool, in Tee's case. A fine of £1 and costs was inflicted in each case, the money being paid by the two firms interested.

JOHN STEWART BIRRELL, 13, Harriet Street, Glasgow, who trades under the title of the London and Glasgow Tea Company, was at Greenock, on May 5th, charged with two offences under the Food and Drugs Acts in that, by the hands of a salesman in his employment, he sold to an inspector under the Acts two 2 lb. tins of syrup, the contents of which were found to be adulterated with glucose to the extent of 87 and 90 per cent. respectively. To facilitate procedure it was agreed to take the two cases together. Mr. Young stated that he purchased two tins of syrup at the London and Glasgow Tea Company's shop at 46, Cathcart Street, Greenock, and paid 3½d. for one and 4½d. for the other. The label on the tin which cost 3½d. bore that the contents were golden syrup, manufactured by the Standard Sugar and Syrup Company, Glasgow, while the label on the tin which cost 4½d. bore that the tin contained "tip-top" golden syrup made from pure cane sugar, and also manufactured in Glasgow. On analysis it was found that the cheaper tin contained 87 per cent. of glucose, and the other 90 per cent. of that adulterate. An expert witness testified that he had twenty-three years' experience of sugar refining and the manufacture of syrups. He considered that the use of a starchy substance like glucose for syrup-making was fraudulent. Purchasers of these syrups would expect to get an article made from sugar. The glucose being colourless would be used to imitate the pale colour of the best syrups. There was very little sweetness in glucose. Defender's agent admitted that the articles were fraudulent, but held that the manufacturers of the articles should have been proceeded against instead of Mr. Birrell. The

Fiscal asked for a conviction, and said that if only a nominal penalty were imposed, it was simply preventing defender from recovering from the parties who were responsible if the statements put forward for defender were true. Sheriff Begg said that under the circumstances he would only ask defender to pay the expenses in the case—namely £6.

At Rhonda on May 8th, John Phillips, grocer, was charged with selling golden syrup containing 70 per cent. of glucose and 30 per cent. of cane sugar, being 50 per cent. above the quantity allowed by the County Council. Defendant stated that he had paid 20s. per case for what he had received, but had received no warranty. The Bench advised him to have a warranty in future, and imposed a fine of £2, including costs, which alone amounted to £1 11s. 6d.

FLUID PRESERVATIVE IN MILK.

At Cardiff, on May 5th, a farmer and wholesale milk dealer, named Frederick Moon, of Highbridge, Somerset, was summoned for selling adulterated milk to George Swetenham, retail dealer, Tyncoed-place, Cardiff. The proceedings were taken at the instance of Sanitary Inspector Green. Mr. Halloran (Town Clerk's office) prosecuted, and Mr. F. W. Bishop (Bridgewater) defended. The case for the prosecution was that the milk, which was consigned by the defendant to Mr. Swetenham, was, on examination, found to contain 9 per cent. of added water. The defence was that the milk had nothing put into it but a little fluid preservative mixed with water, and that if it contained 9 per cent. of added water on arrival at Cardiff it must have been tampered with on the way. The magistrates fined the defendant 40s. and costs or 14 days' imprisonment.

BURIED ORANGES AND A SANITARY INSPECTOR.

A QUEER case against a Sanitary Inspector's action came on for hearing at Greenwich County Court on May 7th, before his Honour Judge Addison, Q.C. The action was that of Leech v. the Lewisham Board of Guardians, which had been partly heard at a previous sitting of the court. Mr. W. M. Thompson appeared for the plaintiff, and Mr. Young for the defendant Board. The claim was for £50 for trespass and illegal seizure of ten boxes of oranges by a sanitary inspector in the employment of the Board, named Shelton, in a stable at Gladstone Mews, Penge, in the occupation of the plaintiff, who is a costermonger. It appeared that on February 14th Shelton was in the vicinity of the stable, and, happening to look through some perforated zinc in the door, saw the boxes of oranges. He was unable to obtain the key, but the landlord of the premises assisted him in effecting an entrance through a skylight. He examined a portion of the oranges, and, coming to the conclusion that they were unfit for human consumption, he had them examined by Mr. Bethune, a justice of the Penge Petty Sessions, who gave a certificate condemning them. They were carted away to a neighbouring farm, where they were covered with earth and disinfectants. The plaintiff was away from home at the time of the seizure. On his return he went to the farm and disinterred sufficient of the fruit to fill six boxes. He showed samples to his solicitors and to members of the Penge Vestry, and, in consequence of their evidence, ten summonses which were brought against him by the Lewisham Board of Works under the Public Health Act were dismissed. The evidence now adduced was of a most conflicting character. Several witnesses for the defence, including Shelton, described the oranges as rotten and mouldy, while several others for the plaintiff described them as good and sound. In the result judgment was given for the plaintiff, with £50 damages and costs.

MARGARINE AS BUTTER.

At Belfast, David M'Master, Inspector under the Food and Drugs Act, summoned Thomas Collins, 105, Durham Street, for having exposed margarine for sale without being labelled, and for delivering same in a plain paper. Mr. A. J. Lewis prosecuted on behalf of the Corporation. Their Worships imposed a fine of 40s. and costs in each case.

WILLIAM M'KEE, 45 and 47, Donegall Road, was summoned by Inspector D. M'Master for having exposed margarine for sale without a label, and having delivered same in a plain paper. Mr. A. J. Lewis prosecuted, and Mr. Diamond represented M'Kee. The inspector stated that on March 15th, he went into the defendant's shop on Donegall Road. Behind the counter there was a box containing a substance which appeared to be butter. He asked the shop boy, Hugh Hare, for a pound of butter from the box in question. Hare replied that it was margarine, and refused to sell it to the witness. Witness told the shop boy that he wanted a pound of the substance in the box for analysis by the public analyst. The shop boy replied that it was margarine. Eventually the shop boy weighed witness a pound of the substance from the box, and charged witness 6d. The substance was delivered to witness in a plain paper. Witness forwarded the substance to the analyst, Professor Hodges, who had returned a certificate that it was margarine. To Mr. Diamond—The substance was sold to witness as margarine. There was a label "Margarine" on the box, but persons coming into the shop could not see the label in consequence of a paper which was hanging over it. Their Worships imposed a fine of £5 and costs.—The same inspector prosecuted W. Moody, provision merchant, 186, North Queen Street, for a like offence. Mr. A. J. Lewis prosecuted, and Mr. Diamond defended. The inspector stated that on the 11th of March he gave a woman a sum of money, and instructed her to go to Moody's shop in North Queen Street, telling her that she might "buy anything she liked for herself, but especially to buy one pound of butter." Witness stood outside Moody's shop, and when he got a signal he went into the shop. Witness then took possession of the substance the woman had been supplied with for butter. Mr. Moody was in the shop. The inspector told him that he had sent the woman in for a pound of butter, and that witness was going to have it analysed by the public analyst. The substance was delivered in plain paper. There was practically no evidence for the defence, and defendant was fined £5 and costs.

At Leeds, on May 5th, Michael Maloney, of 26, Lady Lane, Leeds, a wholesale provision merchant, was summoned for selling on April 1st, four pounds of butter which was found to contain 77 per cent. of foreign fat. Mr. J. A. Compston, barrister, prosecuted, and Mr. H. A. Child, solicitor, defended. It appeared that the butter was purchased by one Hazelgrave, who keeps a small grocer's shop in Ellerby Lane, and had been in the habit of dealing with the defendant; At the instigation of Mr. W. B. Walker, an Inspector under the Food and Drugs Act. Defendant and his daughter, who served the butter, asserted that Hazelgrave asked for four pounds of "lump," but the latter stated emphatically that he asked for best butter. Defendant who had been previously convicted of three similar offences, was fined £20 and costs, and for selling margarine without the proper label, which was made the subject of a second summons, he was ordered to pay £10 and costs.

UN SOUND MEAT AT MIDDLESBROUGH.

Smart Penalty.

At Middlesbrough Police Court, on May 6th, Albert Thompson pleaded guilty to having exposed in the Middlesbrough Butchers' Market meat unfit for human consumption. Mr. George Barnley prosecuted, and Mr. S. F. Thompson defended.—Mr. Barnley stated that the

meat was taken to the market at a time when people were going to do business. The meat was obviously part of the carcass of an animal which the Medical Officer of Health would state would produce irritation in the human stomach if consumed. All the meat was condemned as unsound, and though the defendant was a young man, and not long in business in the town, the fact that he was offering for sale 40 pieces of meat made the case serious.

Mr. George Anderson stated that on the 11th of March he saw the defendant bring the 40 pieces of meat in a handcart, all of which were dressed and ready to be sold for human food. The meat was unsound. Some of it was taken on to a stall in the market, and what remained in the handcart he took possession of. Other three or four pieces were brought from the market, all of which were condemned.

Dr. Dingle, Medical Officer of Health, proved examining the meat, which was unfit for human food, it being soft and giving a fetid odour, and water was issuing from it. The flesh was that of an animal which had suffered from some wasting disease.

Mr. Sydney Morton corroborated the evidence of the Medical Officer.

Mr. Thompson, who defended, did not deny the meat had been intended to be offered for human food, but asked that defendant be leniently dealt with, as it was his first offence.

The Stipendiary pointed out the case was a serious one, and referred to the great danger of disease being spread by this means.

Mr. Robert Thompson, the father of the last defendant, was then charged with having on the same date three pieces of beef in his slaughter-house in preparation for sale, and intended for human food, that such beef was unfit for food, and was destroyed.

The defendant pleaded guilty, but said the beef belonged to his son.

Mr. Barnley said the object of bringing this case was to let the defendant and others understand that it was an offence to have such beef in his possession. Slaughter-house keepers must understand that when a diseased carcass or unsound meat was brought to their slaughter-house they must give notice to the Inspector.

Mr. Thompson said he did not propose to defend the case, but would plead that the defendant had been in business in the town thirty years. The beef was his son's, and he never saw it himself.

His Worship said the bye-law was a very proper one, which refused to allow persons to kill any sort of meat in it they liked. Offences of this sort were always serious, and the defendants must each pay £10, including costs.

DRUG ADULTERATION PROSECUTIONS.

Camphorated Oil.

At Ripon Police Court, Thomas Lockwood, chemist and druggist, Pateley Bridge, was charged with having sold camphorated oil, on April 21, containing 14 per cent. of camphor and 87 per cent. of sesame oil, instead of 21 per cent. of camphor and 71 per cent. of olive oil. The case was supported by the county analyst's certificate.—The defendant referred to the difficulty chemists had in making all the alterations required by the new B.P., especially in the case of preparations for external application, involving loss both of money and drugs, and pleaded that camphor evaporated rapidly, hence the deficiency.—A fine of £2 3s. 2d., including costs, was inflicted.—The following day, at Halifax, Richard B. Paget, grocer, of Skircoat, was summoned for selling, on March 23, camphorated oil which on analysis was found to contain only 15 per cent. of camphor instead of 21 per cent. as required by the B.P.—The defence was that it was sold in the same condition as supplied by a wholesale dealer, and a receipt was produced which specified that the article was camphorated oil.—The Chairman of the Bench said that a

receipt in itself was not a guarantee of genuineness, and tradesmen must learn by experience that they cannot sell to the public anything but the genuine article, and that as the responsibility rests with them they must take care to have a written guarantee as to the purity of the article.—The defendant would be fined 10s. and 19s. costs.—A similar fine and costs was also imposed in the case of Benjamin F. Kitson, grocer, Skircoat, for selling camphorated oil which was made up of 17·5 per cent. of camphor, 15 per cent. of mineral oil, and 67·5 per cent. of olive oil.—The defendant's daughter appeared for the defence, and complained of the hardship on small shopkeepers caused by the alterations in the new Pharmacopœia, which they were now given to understand for the first time came into force last May. The oil in question had been in stock more than twelve months.—The Inspector pointed out that even if such was the case the article was not in accordance with the requirements of the old B.P., as it contained mineral oil.

Oil of Juniper.

WILLIAM GEORGE BLACKHAM, chemist and druggist, of 510, Hornsey-road, Holloway, was summoned at Clerkenwell Police Court, on April 26th, for selling oil of juniper which contained 100 per cent. of oil of juniper wood.—Mr. Bramall prosecuted for the Islington Vestry.—Defendant said he admitted the sale, but disputed the analysis. Therefore he asked that the third sample produced in court by the Inspector might be sent to Somerset House. His oil, he contended, answered every test of the British Pharmacopœia. In the last case of juniper oil tried at that court he considered that other tests than those of the B.P. had been applied.—The analyst's certificate was then put in, and the case adjourned for three weeks, defendant depositing half a guinea for the Somerset House analysis.

Gregory's Powder.

JOHN NAYLOR, chemist, of Menston, was summoned at the Otley Police Court, on Friday, April 28th, for an offence against the provisions of the Food and Drugs Act, in that he had sold, to the prejudice of the purchaser, Gregory's powder compounded with magnesium carbonate instead of calcined magnesia, as directed by the British Pharmacopœia.—Dr. Kaye, Medical Officer to the West Riding County Council, said the powder sold by the defendant was entirely different to that prescribed by the British Pharmacopœia, which authorised the use of calcined magnesia, whereas the defendant had used magnesia carbonate. The result of calcination was to reduce the bulk and also purify the magnesia for internal purposes. Calcined magnesia neutralised the acid, whereas magnesium carbonate had very little action and very little power in neutralising the acid in the stomach. Calcined magnesia was about three times the cost of the other.—In reply to Mr. Knowles, for the defence, Dr. Kaye admitted that magnesium carbonate was used in Gregory's powder in all other countries but England, but he thought England was right. Probably the stomachs of foreigners were not so delicate as the English.—Replying to questions by Mr. Humphris, Dr. Kaye said that magnesium carbonate to some extent corrected acidity, but was not so active as the calcined.—Mr. Knowles submitted that he had no case to meet. The article which his client sold was the article generally sold as Gregory's powder. In the B.P. they were told that the medical properties of the heavy and light magnesia were practically the same. The heavy magnesia was a mild aperient and suitable for children, and therefore was not prejudicial to the purchaser. The mere fact that one was cheaper than the other did not enter into the case.—The Chairman: Does your client make his own powder?—The Defendant: Yes.—In reply to his solicitor, the defendant further stated that magnesium carbonate was better, and did not cake like calcined magnesia.—Cross-examined, defendant said he was not aware that he was liable to a penalty under the Pharmacy Acts for not making articles according to the prescription in the B.P. He made them according to what he thought

was best, but he did not put his opinion against the compilers of the B.P.—A fine of 5s. and costs were imposed.

Oil of Almonds.

PARKE'S Drug Stores, Limited, of 151, Kensington High Street, was summoned at the Clerkenwell Police Court, on April 26, for selling oil of almonds which did not conform to the requirements of the British Pharmacopœia.—Mr. Bramall prosecuted, and Mr. Hicks defended.—Mr. Bramall stated that the analyst had found the substance to be a mixture probably of cotton oil and other oils.—Mr. Hicks said his clients were summoned for a perfectly new offence. It was not for serving an article "not of the substance and quality demanded," but an article "not conforming to the requirements of the B.P." There was no such offence in any Act of Parliament.—Mr. Bramall said he accepted the responsibility for the form of the summons. They did not know what the substance was that had been sold to them. It was a curious conglomeration. He wanted a drug, and a drug should be according to the British Pharmacopœia. He contended, therefore, that his summons was good.—Mr. Horace Smith: You have gone a little too far, I think. That is all. The Magistrate added that he was, however, against the defendants on the point.—Mr. Hicks then pleaded guilty, having regard to the juniper oil case which had been decided against his client. The article sold here was a sweet almond oil made from peach kernels.—The defendants were fined 20s., with 12s. 6d. costs.

LEGIBLE LABELLING OF CONDENSED MILK.

THE movement which we began in August, 1892, to secure legible labelling of "separated," or "skimmed condensed milk," has now practically succeeded, the Standing Committee on Trade of the House of Commons having agreed to the following clause in the new bill.

"Every tin or other receptacle containing condensed separated or skimmed milk must bear a label clearly visible to the purchaser, on which the words 'separated milk,' or 'skimmed milk,' as the case may require, are printed in large and legible type, and if any person sells or exposes or offers for sale condensed separated or skimmed milk in contravention of this section he shall be liable on summary conviction to a fine not exceeding ten pounds."

In the first number of this journal, we began the agitation which has led to this and other necessary reforms in the new act. We look to others of the many abuses and frauds we have exposed, such as alum in baking powder, dilute acetic acid as vinegar, kola in cocoa, etc., being dealt with before the bill becomes law.

THE NEW FOOD AND DRUGS BILL.

Proceedings in Grand Committee.

THE House of Commons Standing Committee on Trade resumed consideration on May 4th, of the Sale of Food and Drugs Bill, Mr. John Ellis presiding.—On Clause 8 (restriction on mixture of butter fat with margarine).—Mr. Kearley moved an amendment to make it an offence not only to manufacture, sell, expose for sale, or import any margarine which contains more than 10 per cent. of butter fat, but also to be in possession of it.—Sir J. Leng opposed the amendment as a petty interference with trade which might hit innocent parties, and Mr. Brynmor Jones and Mr. Ashcroft took the same view. On a division the amendment was rejected by 16 to 15.—Mr. Jeffreys moved an amendment to re-enact that it should be unlawful to deal in margarine which contained more than 6 per cent. of butter fat, instead of 10 per cent. as the bill proposed. He stated that in Belgium the proportion allowed was 5 per cent., and in Denmark 3 per cent., while in Germany it was altogether prohibited. Sir S. Montagu supported the amendment, holding that mar-

garine was largely sold so as to be a fraud upon the public.

—Mr. Ashcroft said he had been living for some days upon margarine, and he had no hesitation in saying that the mixture was equal to the best butter which he could buy. He had caused it to be served out to his family, and they declared that the "butter" was better than ever before. The general interests of the community must override the erroneous opinions of the agricultural members. Mr. G. Whiteley agreed that Parliamentary restrictions on the admixture of commodities innocent and desirable in themselves were utterly unjustifiable except on the ground of compromise between opposing interests. He suggested that the 10 per cent. should be allowed to stand as a fair compromise; otherwise, if the amendment were carried, he would do all in his power in the country to have the Bill thrown out.—Sir J. Leng stated the position of the home manufacturers of margarine on this question. There were, he said, 600 tons per week of margarine manufactured in this country, equal to 30,000 tons per annum and a value of £1,250,000 sterling. The capital invested in the making of margarine in this country was not less than £1,500,000 sterling. The object of the amendment was to advance the price of home-made butter. This legislation was a reversal of the policy of freeing trade and commerce as much as possible; it was placing them in fetters, meddling at every point with a useful manufacture, and for no earthly good except a mistaken idea that it would benefit one class of the community against the other.—Mr. Long asked the committee to stand by the limitation of 10 per cent. laid down in the Bill. The best quality of margarine could be produced with this limitation. He agreed with Sir J. Leng that it was undesirable to interfere with trade, and the freer it was the better; but he asked the committee to remember that the 10 per cent. limit was put in, not on the demand of agriculturists, but because it had been amply proved that these so-called mixtures were the cause of an enormous amount of fraud, which it was impossible to prevent under the present law. The best scientific evidence showed that the 10 per cent. limit would prevent fraud and at the same time not interfere with the manufacture of an article of food.—Sir C. Cameron refused to regard the clause as a compromise. He did not care whether the percentage was 10, 6, or 30; he regarded this proposal as a vicious and retrograde step. What business had they to impose restrictive regulations as to how a man should carry on a legitimate and honest business?—Mr. Power contended that, inasmuch as it was almost impossible to distinguish margarine from butter, it was necessary to protect the consumers against margarine being palmed off upon them as butter.—Mr. Kearley declared that there was a huge and hideous swindle going on in the country in selling these mixtures as butter, and said that no less than 95 per cent. of them were sold at butter prices as butter. He did not look at the question from the agricultural standpoint at all, but he had watched for years this great fraud, and hoped the committee would accept the limitation of 6 per cent., which would make it clear what Parliament meant.—Mr. T. W. Russell, who was chairman of the Select Committee, pleaded for a compromise. In this controversy they had practically the agricultural community on one side and the great consuming masses in the large towns on the other, and any settlement arrived at must be in the nature of a compromise.—Mr. Lambert, Mr. Strachey, and Mr. Channing repudiated the suggestion of the Secretary to the Local Government Board that this was a question between town and country. Leading grocers and others in all the great towns, Mr. Channing said, supported the reduction of the limitation from 10 to 6 per cent.—Mr. Burns denied that the working classes were clamouring for margarine, and invited Sir J. Leng and Sir C. Cameron not to delude themselves with the idea that a Scotchman liked margarine instead of butter in his porridge. (Laughter).—On a division the amendment was rejected by 34 votes to 15, and on the question that the clause as amended stand part of the Bill, Sir C. Cameron moved its rejection, on the

ground that the clause laid an uncalled for additional restriction on the manufacture and sale of margarine. A leading manufacturer informed him that upwards of 20 per cent. of his product contained more than 10 per cent. of butter fat.—Sir J. Leng supported the rejection of the clause, and said that margarine manufacturers might be fined and penalized and perhaps imprisoned for doing what appeared to be inevitable in the course of their manufacture.—Mr. Bartley opposed the clause in the name of his constituents. The object of the Bill was to prevent fraud, and nothing else, and he protested against people being prevented from eating margarine if they liked, provided they knew what they were buying. The clause was carried by 27 to five. Clause 9 (provision as to name and address of person selling milk in a public place) and Clause 10 (division of samples taken in course of delivery) were agreed to with verbal amendments. On Clause 11 (provisions as to condensed, separated or skimmed milk), Mr. Strachey moved to add a proviso that no colouring matter should be added to such milk. This, he thought, was a provision second only in importance to the colouring of margarine, because it was obvious that in this case the colouring was not introduced to please the eye, but to defraud the customer. There were, he said, thousands of gallons of separated milk sold in the poorer quarters of the town as whole milk.—Mr. Long admitted that there was a great deal in what the hon. member said, but the argument which he had used at a former stage in regard to colouring applied here—namely, that colouring, wherever it was an improper operation of trade, ought to be prohibited in all cases and not in selected cases. Such a prohibition ought to be made general. Apart from that, he thought the clause was strong enough as it stood.—Mr. Llewellyn thought it a pity that steps should not be taken by means of this Bill to warn the public against this form of fraud. The farmers did not colour their milk as a rule; it was done in London before the milk reached the consumer. The amendment was rejected by 29 to 6, and the *maximum* penalty under this section having been increased from £2 to £10, the clause as amended was agreed to. On Clause 14, Mr. Kearley said it raised the important subject of penalties for offences under the Sale of Food and Drugs Act, 1875, and he moved the adjournment of the debate. This was agreed to, and the committee therefore adjourned.

The Standing Committee on Trade on May 8th resumed the consideration of the Sale of Food and Drugs Bill, and the sitting was entirely occupied by discussions of the pains and penalties proposed to be inflicted under the measure. Mr. John Ellis presided. On Clause 14 (Offences under the Sale of Food and Drugs Act, 1875), Mr. Kearley moved an amendment to increase the penalties named in the Bill, by providing that an offender for a second offence should be liable to a penalty of not less than £5 and not exceeding £50, and for a third or subsequent offence to a penalty of not less than £20 and not exceeding £100, or in the discretion of the Justices hearing the case to imprisonment with or without hard labour for a period not exceeding three calendar months. He submitted that if this fraud was to be checked there must be power of imprisonment for persistent offences. There was, he said, a man in London, having shops all over the place managed by nominees, who sold margarine as butter, and whenever an inspector made a raid upon one of these premises, and an attempt was made to serve a summons, it was found that the individual in charge of the shop had disappeared, having transferred the business "to a brother," and so the fraudulent work went gaily on. Mr. Long said there was no difference in principle between the Government and the hon. member on this question. There was a general agreement that it was necessary to introduce a power of imprisonment in the graver cases, because the worst offenders could afford to ignore the fines altogether, the profits of this fraudulent trading being so enormous. He suggested, however, in the terms of a subsequent amendment on the paper, that the penalty of imprisonment should only be applied on a third offence,

and then only when such offence was brought personally home to the person charged. There was the objection, too, to *minimum* penalties that they practically tied the hands of the Court in a manner which defeated the object of the Legislature. Some discussion followed, and on a division the amendment was rejected by 27 to 8. Mr. Ashcroft moved the insertion of words giving a person charged under this Act the option of claiming to be tried by a jury.—The Solicitor-General opposed the amendment, and recommended the committee to adhere to the general rule of the criminal law in this matter. On a division, the amendment was rejected by 28 to 9.—Mr. Lopes moved a new subsection, referred to at an earlier stage by the President of the Local Government Board, as follows:—"Where, under any provision of the Sale of Foods and Drugs Acts, a person guilty of an offence is liable to a fine exceeding £50, and the offence, in the opinion of the Court, was committed wilfully by the personal act, default, or negligence of the person accused, that person shall be liable (if the Court is of opinion that a fine will not meet the circumstances of the case) to imprisonment, with or without hard labour, for a period not exceeding three months."—Mr. Lambert moved as an amendment to this proposed sub-section to give a discretion to the magistrate to pass a sentence of imprisonment on the second as well as a third offence.—This was negatived, and, on the motion of Mr. Tomlinson, the word "wilfully" was struck out of the sub-section as unnecessary by 23 to 8.—Sir C. Cameron proposed to substitute for "default or negligence" in the sub-section the words "or with the connivance of." He thought it would be a serious thing to send a man to prison for an act of negligence or default.—The Solicitor-General, in opposing the amendment, asked the hon. member for Bridgeton (Glasgow) if he had never heard of a man being convicted of manslaughter for nothing more than an act of negligence? He hoped the committee would not water down the clause.—Mr. R. G. Webster retorted that if the Solicitor-General's coachman ran down and killed somebody in the street it was the coachman and not the hon. and learned gentleman who would be tried for manslaughter. This committee seemed to have very little sympathy with the trading community. The committee was partly agricultural and partly Socialistic. ("Oh.") This would be a very unpopular law unless they introduced proper safeguards against injustice.—The amendment was negatived by 25 to 6.—On the question that the proposed new section be added to the Bill, Sir J. Leng, by way of protest, divided against it, but the section was carried by 21 to 6.—Captain Donelan moved to add as an additional sub-section that "any persons convicted of a second or any subsequent offence against the Act should be required to publish at his own expense a notice of his conviction in the public journals of the locality in which his place of business is situated."—Mr. Long thought the amendment savoured of persecution—not prosecution, and he asked the committee to reject it.—The committee having divided, the amendment was rejected by 22 to 12, and Clause 14 as amended was added to the Bill. Clause 15 was agreed to after a verbal amendment.—On the motion of Mr. Long, a new sub-section was inserted in place of sub-section 1 of Clause 16, providing that when any article of food or drug had been purchased from any person for test purposes any prosecution should be instituted within 28 days from the time of the purchase. The clause as amended was added to the Bill.—The consideration of Clause 17, providing that a written warranty or invoice should be no defence unless the defendant notified that he intended to rely on such warranty or invoice, and specified the name and address of the person from whom he received it, was reached when the committee adjourned.

THE SALE OF FOOD AND DRUGS BILL.

At the Society of Arts, on May 2nd, a Conference called by the British Dairy Farmers' Association was held

to consider the Sale of Food and Drugs Bill. Count Moore, M.P., was in the chair, and a large number of Chambers and Associations were represented, including the Central and Associated Chambers of Agriculture, the Butter Association, the Bath and West of England and Southern Counties Society, the Farmers' Club, the Cleveland Chamber of Agriculture, the Irish Agricultural Organisation Society, the Manchester and Salford Milk Dealers' Society, the Metropolitan Dairymen's Society, the Surrey Agricultural Society, the Thames and District Dairy Farmers' Association, the Warwickshire Chamber of Agriculture, the West Riding Chamber of Agriculture, and the Yorkshire Union of Agricultural Clubs and Chambers of Agriculture. The Members of Parliament present included Mr. Laurence Hardy, Mr. Strachey, Mr. Hobhouse, and Mr. Grant Lawson.

The Chairman said there was evidently a very firm and resolute opposition to many of their suggestions, and they were not, therefore, very hopeful of having many of their amendments accepted. There was a very strong consensus of opinion throughout the country against the colouring of margarine; but he was sorry to say that the Grand Committee had so far not accepted the amendments on the subject which had been suggested by the Dairy Farmers' Association.

On the motion of Professor Long it was decided: "That the recommendation of the Select Committee on Food Products Adulteration, 'That the artificial colouring of margarine to resemble or imitate butter be prohibited,' should become law, and that no colouring matter should be added to condensed, separated, or skimmed milk."

The other amendments agreed to by the Conference included the omission of Sub-section 7, Clause 1, permitting the use of preservatives; that the butter fat mixed with margarine should not exceed 6 per cent.; that all margarine factories should be subject to inspection, and that an employer acting *bona fide* may plead the misconduct of his servant in defence of himself.

FOOD PRESERVATIVES.

A Parliamentary Committee Appointed.

In the House of Commons, on May 4th, Mr. A. Moore asked the President of the Board of Agriculture whether it was his intention to appoint a Committee to deal with preservatives in food.

Mr. Chaplin.—It is intended to appoint such a Committee, and it is in course of formation at the present moment.

Mr. A. Moore.—Does the right hon. gentleman mean a Departmental Committee or a Committee of the House of Commons?

Mr. Chaplin.—A Departmental Committee.

The committee on food preservatives will be composed wholly of experts, and the enquiry will be divided into two parts. The first will consist in the obtaining from various parts of the kingdom of samples of butter, milk, and other foodstuffs in which boracic acid and other preservatives are used. This will be a comparatively short and easy task. Then will come the second part of the investigation, which must necessarily occupy a deal of time. The samples will be handed to medical men, whose duty it will be to pursue a series of experiments with them, with the object of ascertaining whether and to what extent the wholesomeness of food is in any way affected by the use of the preservatives. The experiments will, of course, include administration of the samples to living beings, in order to test their effect upon health and digestion.

ADULTERATION IN HERTFORDSHIRE.

THE report of the County Analyst, Mr. A. E. Ekins, the Laboratory, St. Albans, states that during the quarter ended the 31st of March, 1899, thirty-five samples of food

and drugs were submitted to him by the inspectors of the Hertfordshire County Council, as follows:—Milk 11, butter 8, coffee 1, treacle 5, sugar 3, ginger 2, lime water 2, camphorated oil 2, and whiskey 1. Of these four samples were adulterated. Three of the samples of treacle were adulterated with commercial glucose syrup. This product is made from starch by the action of acids, and while not harmful there can be no doubt that its presence is an adulteration, especially in large quantities. The samples I estimated to contain at least 25, 35, and 65 per cent. respectively of this foreign ingredient. Treacle should be entirely the product of cane sugar, the starch glucose being much less sweet and devoid of aroma. One of the samples of butter was adulterated. I am pleased to report on an improvement in the quality of the samples generally.

ADULTERATION IN BRISTOL.

In the first three months of the year the City Analyst examined 152 samples of food, and found all genuine but 11. By far the larger part of the samples analysed were those of milk and butter; vinegar was pretty well represented in the list; there were a few parcels of flour, and one each of tea and margarine. Nine of the eleven samples condemned were milk; in one case the vinegar was of the distilled variety; and one specimen of supposed butter proved to be margarine.

ADULTERATION OF FOOD IN MANCHESTER.

THE Superintendent of the Manchester Sanitary Department reports that during the quarter ending March, 1899, 467 samples of food have been procured for analysis, viz.:—Milk 317, skim milk 2, butter 49, spirits 20, white pepper 10, coffee 9, beer 8, mustard 7, ground ginger 6, bread 6, lard 5, cheese 4, tea 4, Demerara sugar 4, preserves 3, flour 3, oatmeal 3, ground rice 2, Caper tea 1, and sweets 1. Of these 17 samples were adulterated, viz., milk 8, butter 5, and spirits 4. Magistrates' summonses have been issued in 22 cases, in 10 of which fines were imposed, amounting to £17 2s. 6d.; 10 summonses were withdrawn, in one case costs only were imposed, one summons is pending, and in three cases the offenders were cautioned by the committee. Several of the butter samples reported as genuine were of such poor quality that the City Analyst states that he would have been justified in certifying them as containing foreign fat were it not for the fact that the Somerset House authorities had not given any standard for butter in which a small percentage of foreign fat was suspected to be present.

TYPHOID AND OYSTERS AT BRIGHTON.

In his annual report for 1898, just issued, Dr. A. Newsholme, Medical Officer of Health, gives a table showing the history of cases of enteric fever in relation to the eating of shell fish. He states that in 41·8 per cent. of the total cases of Typhoid Fever originating in Brighton during 1898, there was a high degree of probability that sewage-contaminated shell-fish were the cause of the attack. This percentage is higher than in preceding years, and it is a public misfortune that our efforts in obtaining control over the sale of these contaminated molluscs have hitherto been unavailing. It must not be supposed, however, that no good has been effected. Medical and public opinion have both been aroused, and there is reason to hope that some measures of partial protection will ere long be proposed by the Government.

Of the 54 cases of Typhoid Fever from the causation of which molluscs were excluded, eight occurred,

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Food and Sanitation.

SATURDAY, MAY 20, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

All communications for the Editor of "Food and Sanitation" must be addressed to

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LONDON, E.C.

of samples which will, if the Board of Agriculture does its work, compel enforcement of the Acts in the many counties and towns where they are now a dead letter. We must confess, however, to having very little faith in the Board of Agriculture, which is hide-bound, ignorant, and circumlocutory to exasperation point; as witness its persistent refusal to take samples of imported butters and its recent reply to those who brought before it the question of oatmeal adulteration.

At a meeting of the directors of the Edinburgh Chamber of Agriculture, held last week, a letter was read from Mr. Elliot, of the Board of Agriculture, stating that the Board could not see their way to place on their inspectors the duty of detecting the adulteration of oatmeal. The Board, however, would prosecute cases that the directors could authenticate. Disappointment was expressed with the reply, it being considered that it was the duty of the Government to take up this work. This obstructive attitude has always characterised the Board of Agriculture. How not to do it is the study of clerks of Mr. Elliot's pattern, who appear to believe they are doing England a service by taking large salaries for inditing inanities. The Scotch oatmeal purists must keep kicking at the Board as the butter purists did, and its official apathy must constantly be scathingly criticised in Parliament and the Press, or it will, as heretofore, be merely a pretentious humbug, and leave counties and towns to burke the Acts as they please.

Meanwhile our readers might take a few samples of Scotch oatmeal and see if the adulteration be as alleged. The Scottish oatmeal manufacturers state that large quantities of Canadian and American meal are mixed with what is sold as Scottish oatmeal, but unfortunately they give us no data as to the firms practising the frauds.

But to return to the new Act: the increased penalties and the power of imprisonment are in the right direction, and will enable local authorities to deal more effectively with notorious offenders such as the Morgans, Browns, and Danish Butter Companies who for so long have laughed at the law. As regards the invoice being a warranty, we found reason to strongly object to this some years ago, but under the now proposed safeguards we think it is only just to the retailer, as all that is really wanted is that the true perpetrator of the adulteration be reached, and our readers know how seldom this is the retailer. Indeed, our columns have often recorded how loth inspectors are to prosecute struggling traders who are victims of unscrupulous manufacturers.

Clause 12 is a bad one, as it leaves the existing frauds of microscopic labelling untouched in the cocoa, mustard, and other trades, and in this it is unjust. Existing microscopic labelling of condensed milk is to be prohibited, and the manufacturers must change their labels and make-up of tins, but existing microscopic labelling of cocoa adulterated with rice and sugar is to be left uninterfered with. This favouritism for adulteration is unworthy of the House of Commons: it is making a

WHAT IS GAINED IN THE NEW FOOD AND DRUGS ACT.

THE proposed new Act is now out of the hands of the Grand Committee, and may reasonably be expected to be soon on the Statute Book.

Taken altogether, it goes some distance in the right direction, inasmuch as it empowers the compulsory taking

scapegoat of our industry, and not dealing broadly with a principle.

One clause which we welcome is that put in on the initiative of Mr. Bartley, namely, "Food shall include every article used for food or drink by man other than drugs or water, and any article which ordinarily enters into or is used in the composition or preparation of human food, and should also include flavouring matters and condiments."

This lays the ghost of Mr. Justice Hawkins' decision that baking powder was not an article of food, as it was not eaten as such, and removes another of the anomalies we exposed. It puts at rest any doubts about prosecutions for yeast adulteration and many other articles respecting which doubts have hitherto been held.

Altogether, our readers will see the new Bill has now many good points. That fatal blot the 10 per cent. of butter in margarine we hope the House of Commons will reject. It will be a curse to the administration of the Act, ruinous to retailers, and bring a host of expert squabbles and lying. Far better would it be to leave margarine alone, have it uncoloured, or in special blocks, than saddle retailers with this curse.

ENCOURAGING IRISH INDUSTRIES.

MR. GERALD BALFOUR is to be congratulated on having, as Chief Secretary for Ireland, shown a practical desire to advance the prosperity of that country. In the Bill introduced in the House of Commons last week it is proposed to establish a Board of Agriculture in Ireland, with an annual income of £100,000 or £110,000. Of this sum £55,000 is to be devoted yearly to technical instruction and the encouragement of local industries, and £10,000 annually to sea fisheries; £15,000 is provided for the erection of suitable buildings, the Munster Dairy School is to receive £10,000 for a more complete equipment for educational work, and in all the Bill shows a real solid effort to encourage Ireland's industries. Of course, Mr. Gerald Balfour's proposal is denounced in some quarters, but its opponents are of the frothy ignorant self-seeking parasites who, on the fall of Parnell, formed the many wretched cliques which have made Irish politics a synonym for insincerity and scurrility. With the two exceptions of Mr. Plunkett and Mr. Field, there has been no real desire or attempt on the part of Irish members to encourage Irish trade, and Mr. Balfour deserves every credit for his measure. The pity is that it was not introduced twenty years ago, before Denmark took the lead in butter production, but better late than never.

A COLOSSAL FRAUD FORGOTTEN IN THE NEW ADULTERATION ACT.

It is strange that one of the most far-reaching and impudent frauds upon the consumer has received no mention, honourable or otherwise, in the discussions in

Grand Committee on the Food and Drugs Act, and that no provision is made in the new Act to enforce the law and stop the swindle. We refer to the robbery everywhere practised of selling excess water at spirit price. Section 6 of the Food and Drugs Act, 1879, enacts that brandy, whisky, or rum shall be sold not lower than 25 degrees under proof, and gin 35 degrees under proof. This section in the amended Act of 1879 was passed specially to fix the amount of dilution allowed by the publican, but the intention of Parliament was frustrated by the amazing decision of the High Court in *Sandys v. Small*, which permitted the publican to rob his customers, sell water at spirit price, and defy the Adulteration Acts, provided he exhibited a notice stating that all "spirits were sold diluted."

Hence we find whisky sold 50 degrees or more under proof, and the fraudulent vendor shielding himself behind a notice that "all spirits sold in this bar are diluted." This is treating the Legislature with contempt, and only in a few places has any attempt been made to grapple with the fraud by the police objecting to the renewal of the licence unless the notice was removed and the intention of the Act obeyed.

So enormous, however, are the filched extra profits that the bulk of publicans practice the fraud everywhere throughout the kingdom. It will be surprising if the House of Commons should pass the new Food and Drugs Act and leave this swindle untouched.

A line declaring the exhibition of such notice is no defence would carry out the views of Parliament, and enforce the same measure of honesty on the publican which the new Act enforces upon the grocer. Some temperance members of the Bench and the House of Commons have been heard to declare that the more spirits are diluted the better, but that is beside the point. The Act specifies that the buyer should receive the spirit of a certain strength, and even the most earnest temperance advocate should stop short at encouraging dishonest trading.

ADULTERATED BORAX.

AT Rugeley Petty Sessions, on May 2nd, George Averill, pharmaceutical chemist, of Market-square, Rugeley, was summoned for selling powdered borax adulterated to the extent of 100 per cent. with sodium bicarbonate.—The defence was that an assistant had served sodium bicarbonate out of a new cask in mistake for the borax.—The magistrates accepted this view of the case, but at the same time thought that it was a very serious mistake, and fined defendant £3 7s., including costs.

ADULTERATED YEAST.

AT Bishop Auckland, on May 8th, Joseph Smith, grocer, Merrington-lane, was charged with selling yeast which was not of the substance and quality demanded by the purchaser. Inspector Thompson said he asked for six ounces of yeast, for which he paid threepence. The county analyst certified that the yeast was impregnated with 10 per cent. of potato starch, which was not a natural constituent of yeast. Mr. Wilkinson, for the defendant,

pleaded guilty. In mitigation, he stated that the defendant bought what he expected was good yeast, and sold it as such. He had had a sample analysed by Mr. Wilson, of Stockton, who stated in his report, "There are, I believe, those who suggest that the presence of a little starch is of advantage, inasmuch as it prevents the yeast going bad." The magistrates imposed a fine of 10s.

DEMERARA SUGAR ADULTERATION.

HENRY KENNETT, of 46, Chapel-street, Clerkenwell, was summoned, on May 10th, for selling Demerara sugar containing an admixture of white crystals, coloured with an organic dye. Mr. Beck defended.

A pound of sugar at 1½d. was purchased, and the defence was set up that "sugar" only was asked for, and not "Demerara" sugar. The agent of the Vestry said she asked for "Demerara," according to her instructions.

Defendant was ordered to pay 12s. 6d. costs.

Charles Rapson, of 57, Chapel-street, summoned for the same offence, was fined 20s., with 2s. 6d. costs.

ANALYSTS DIFFER OVER MILK.

At Birmingham, on May 9th, the Chetwynd Mills and Creamery Company (Limited), Newport, Shropshire, again appeared in answer to a summons charging them with selling milk deficient in natural fat. Inspector Jones took a sample from some milk which had been consigned by the defendants to customers in Birmingham.—Dr. Hill found it to contain only 2·58 per cent. of natural fat, which according to his standard meant a deficiency of 26 per cent.—Mr. E. A. Warmington, public analyst of Dudley, who was called for the defence, found 2·8 per cent. of fat, and this, according to his standard, justified him in describing the milk as perfectly pure.—In the face of this disagreement the Bench decided to send the sample to Somerset House. The analysts there found 2·47 per cent. of natural fat, and added: "We are of opinion that a portion of the original fat has been abstracted."—In view of this the Bench imposed a fine of £5 and costs.

ADULTERATED TREACLE.

At Burslem Police Court, on May 9th, before the Potteries Stipendiary Magistrate (Mr. Harold Wright), Arthur Espley, Market-street, Fenton; Edwin Hulme, High-street, Fenton; Charles Keating Edwards, High-street, Stoke; and Herbert Walters, Liverpool Road, Stoke, grocers, were charged under the Food and Drugs Act with selling golden syrup or treacle which was adulterated with glucose syrup.

Mr. E. W. H. Knight, inspector under the Food and Drugs Act, who prosecuted, said he did not impute any fraudulent intentions to the defendants in offering this treacle for sale, it having been sold by four of them as it was received from Messrs. Crossfield and Co., of Liverpool, the refiners. That firm had taken upon themselves the onus of defending the cases and bearing such penalties as might be imposed. Genuine treacle was the true refiners' sugar, while starch glucose was a modern production. The refiners at first thought there was no harm in putting this foreign ingredient into their treacle and golden syrup. These articles so adulterated had been sold for some time. Afterwards refiners came to the conclusion that this was not right, and decided that in future treacle containing glucose must be sold as a mixture.

Samples of the treacle sold by the defendants were certified to contain from 19 to 59 per cent. of glucose.—The defendants pleaded guilty.

Mr. Sproston, who appeared for Hancock, pointed out that he had been left undefended by the wholesale dealer, who was the actual offender.

The Stipendiary Magistrate said that purchasers were entitled to have what they asked for. He fined Hancock 20s. and 15s. costs, and each of the other defendants were fined 40s. and 15s. costs.

WATER AT SPIRIT PRICE.

At South Shields, on May 10th, Patrick Fryer, landlord of the Shipwrights' Arms, Holborn, was charged under the Food and Drugs Act with selling adulterated rum.—The evidence went to show that the inspector under the above Act called at the house and purchased a pint of rum, for which he paid 2s. As usual, he divided the sample into three parts, and the one which was sent to the public analyst was certified to contain 12·8 per cent. of water, which reduced the quality of the spirit 34·6 under proof, the limit allowed being 25 degrees under proof.—For the defence, it was proved that the barmaid had filled the rum cask up with port wine by mistake, and that accounted for the reduced percentage.—A fine of 10s. and costs was imposed.

EXCESS WATER IN BUTTER.

GEORGE VENNOR, 11, Victoria-terrace, Taunton, was charged at the Tiverton Police Court with selling butter, on April 18th, to the prejudice of the purchaser, it being adulterated with 10 per cent. of water. Defendant, who pleaded not guilty, was represented by Mr. C. P. Clarke, of Taunton. Mr. Clarke took exception to the form of the summons. The charge against defendant was that he sold a certain article of food which had been adulterated with 10 per cent. of water. There must be a certain quantity of water in all butter. But the difficulty was to know how much water was alleged to have been in this butter. Ten per cent. of adulteration could not amount to an offence.

Head-Constable Rawle said that on Tuesday, 18th April, he bought 1lb. of fresh butter from the defendant in Tiverton Market, for which he paid 1s. He then told him he was an inspector under the Food and Drugs Act, and that he intended to submit it to the Public Analyst. He divided it into three parts, one of which he offered the defendant, which he accepted. One he delivered to the analyst the same day, and the other he now produced. Mr. Howart, Public Analyst for the borough of Tiverton, said he received from the last witness a sample of butter sealed. The result of the analysis was that the butter contained 30 per cent. of water, 1·33 per cent. of salt, 67·67 per cent. of fat, and 1 per cent. of curd. The butter they got in the neighbourhood averaged from 9 per cent. of water to 13 in cold weather, and in hot weather it occasionally rose as high as 16 per cent., but very rarely. By Mr. Clarke: The amount of water in butter would first of all depend on the milk of the locality, and afterwards on the manufacture.

Mr. Clarke, for the defence, said they were quite willing to meet the case on its merits. They had been, however, put to a great difficulty in the matter for two reasons. First of all, the summons was so indistinctly set out that it was impossible for them to know the precise charge; and in the second place, the analyst's certificate was not made out under the form of the Act, and, therefore, the prosecution must fail.—Mr. Loosemore suggested that the case might first of all be tried on its merits, which Mr. Clarke consented to, and called the defendant, who said he had been carrying on business as a butter merchant in Taunton for 30 years. He attended markets and contracted with many farmhouses. In preparing this particular lot of butter he adopted the same practice as he had done for the last 30 years. About 3,000lbs. of butter

a month passed through his hands. He had never had a complaint from customers as to the butter not keeping.

The Chairman said he had been deputed to say that the Bench considered it was a serious and important case, and he would like to ask Mr. Clarke whether he still wished for time to get analysis from Somerset House. If he (Mr. Clarke) made that application, they would be prepared to grant it.

Mr. Clarke asked if their Worships would adjourn the case generally till the next meeting. He had had the analysis of the Somerset County Analyst, and would have had him there but for the expense.

Head-Constable Rawle objected, because his case was now concluded.

The Chairman said the Bench thought that there was too much water in the butter, and it would be well to have it sent to Somerset House.

Mr. Clarke said that as he had had an expression from the Bench he was willing to assent to their proposal.

PEPPER PLUS BLEACHED PEPPER HUSKS.

At Liverpool, on May 16th, Christina M'Loughlin, 15, Limekiln-lane, was fined 2s. 6d. and costs for having sold pepper containing 5 per cent. of bleached pepper husk; and Sarah Ann Gribe, 1, Roden-street, was fined 2s. 6d. and 2s. 6d. for a similar offence. Evidence was given for the defence that the pepper had been sold in the same condition as the defendants got it. The persons who sold to the defendants had bleached the pepper husks for the purpose of deception.

DISGUSTING REVELATIONS *Re* SAUSAGE-MAKING.

FREDERICK THOMAS ADAMS, a wholesale sausage manufacturer, of 40, Chalmer-road, Homerton, was summoned before Mr. Bros, at the North London Police Court, on May 10th, at the instance of the Hackney Vestry, for having deposited in his possession meat, weighing 14lb.—for the purpose of preparation for food—which was unsound and unfit for the food of man. Charles Hart, jun., a wholesale cats' meat dealer, 165, Railway-place, Mile End, was also summoned for selling the said meat to the defendant Adams.

Mr. Horace Avory (instructed by Mr. Tiddeman, solicitor to the Vestry) prosecuted; Mr. Bodkin (instructed by Mr. Ricketts) defended Adams, and Mr. C. V. Young appeared for Hart.

Mr. Avory, in opening the case, said the summonses were taken out under Section 47 of the Public Health Act of 1891. In consequence of information which came to the knowledge of the Vestry, the sanitary inspector kept a watch on Hart's premises. On April 19 they saw a quantity of meat conveyed in one of Adam's carts from the premises at Mile End to the defendant's factory at Homerton. The meat, apparently, was not good enough for cats' meat, but yet it was considered fit for sausages. The meat was subsequently seized by the inspectors, brought to this court, and condemned by the magistrate. It seemed to be a fact that the defendant Adams was away from his premises at the time, but his attention was called to the matter the next day, and he at once called upon the medical officer for the parish, and said then that he had made an arrangement with Hart to send him on any carcasses which were good and fit for conversion into sausages. He said he was compelled to purchase in this way owing to competition.

Arthur Joseph Bobbitt, one of the sanitary inspectors of Hackney, said that on April 18th he kept observation outside the defendant Hart's premises, and he saw a small

van with the initials "F. T. A." on the cover leave. He could not say what the van contained. Hart's premises were contained in a large railway arch. No name was exhibited, and there was no external indication as to the nature of the business carried on within. On the following day, April 19th, he was keeping watch with another inspector named Sheppard. He saw a quantity of meat delivered at the arch. About mid-day a cart, bearing the defendant's name and address in small letters, entered the arch, and left again. Sheppard followed the cart on a bicycle. Witness went at once to Adams's premises, and saw the same cart in the yard. Witness then found that it contained a quantity of meat which was wet and smelt badly. He sent for the medical officer, and under his direction four of the pieces were seized. Together they weighed 14wt. 14lb. Personally, he considered that the whole of the meat in the cart was bad, but there could be no doubt about the pieces seized. They were placed in a hamper, brought to this court, and condemned. A representative of the defendant attended at the court, and made no objection to the condemnation.

Cross-examined by Mr. Bodkin, the witness said that throughout the whole of the 19th he did not see Mr. Adams. He could not say what was done with the portion of the consignment which was not seized. He gave no directions. The meat was boned beef, and apparently the pieces seized consisted of three shoulders and a flank. He should say that they were from different animals. Adams was in a large way of business. His premises were new, and only built last year. He (witness) had been over the premises before, and had no reason to think that Mr. Adams would do anything to prevent inspection. He was of opinion that the meat came from animals which had died naturally, and not from beasts which had been slaughtered.

Questioned by Mr. Young, the witness said he was not surprised that Hart's name was not over his Mile End premises, as they consisted of a railway arch. He had a knacker's yard in Philip Street, Canning Town. At Mile End the business carried on was that of a fat boiler and cats'-meat vendor.

Re-examined.—It was in consequence of information that the watch was kept.

Dr. John King Warry, medical officer of health for Hackney, said that he gave instructions for the watch to be kept. On the 19th he was called to Chalmer-road, and he examined the meat in the cart. He formed an unfavourable impression of the whole lot, and told Adam's men so. Four pieces were certainly not fit for human food, and they were seized. They smelt badly, were beginning to decompose, and were flabby. One of the pieces was pale and another was jaundiced. He thought that the animals from which the beef was taken had died natural deaths. One of the beasts had possibly succumbed to tuberculosis, but of that he was not positive. The rest of the consignment was on the border line between sound and unsound. On the day following the seizure Adams called at his office and said he was away from business the day before, and he hoped the matter would not go any further. If it did it would ruin him. He admitted that the meat came from Hart, and said that he had an arrangement with him to send on good carcasses that he might meet with in the course of his business. He added that he was obliged to do this owing to competition in the trade.

By Mr. Bodkin.—He suggested that the defendant should write a letter to the committee explaining his position, and he did so.

In re-examination the witness said the meat must have been unsound at any time that day.

Mr. Bodkin, in addressing the Court for Adams argued that the Act could not be applied to the case unless there had been a sale. In this case there had been no sale, and the meat was only sent to the defendant on approval. It happened on April 19th that Mr. Adams had joined a

coach party to Epsom, leaving early in the morning, and not returning until after midnight. He had no knowledge of what had taken place at his works. He alone bought meat to be passed into his factory, and in the ordinary course the meat would have been left until the next day for his approval before he purchased it.

The defendant Adams then went into the box to give evidence on his own behalf. He said he lived in King Edward-road, South Hackney, and before he built the factory at Homerton he had been in business in Bethnal Green for 16 years. At his steamworks at Homerton he employed forty to fifty hands. On April 19th, as Mr. Bodkin had said, he went to Epsom, leaving his foreman, a man named Pitts, in charge. He knew nothing of the delivery from Hart until the next morning. No previous arrangement had been made, and Pitts had no authority to purchase meat. He (witness) personally superintended his works, and no meat was passed into the machines unless it was passed by him. He only dealt with the wholesale trade—with men who could tell at a glance the quality of a sausage—and he had never received any complaint against him before.

In cross-examination, the defendant said he bought his meat at Smithfield Market, and had only dealt with Hart twice since Christmas.

Mr. Avory.—When did you come to the arrangement we have heard about?

The Witness.—After the first transaction, and I then said he was to advise me when he had a good carcase. It was not true that his cart was there on the 11th, but had had a small van with the initials "F. T. A." on the cover.

Mr. Avory.—If you were away the foreman would not take in meat unless you had given him instructions to receive it?

The witness assented.

By Mr. Bros.—In his previous transactions with Hart he had paid 2s. to 2s. 4d. a stone for the meat.

Richard Pitts, foreman to Adams, said that on April 19th Hart called at 10 a.m., and said that he had got some good meat. Witness said he would send for it, and he did so. The cart brought back 752lb. of meat. He had no authority to buy meat, and intended to place this meat in a cool place in the basement for Mr. Adams's inspection.

Cross-examined.—No meat came from Hart's on the 18th. Mr. Adams had several vans.

Alfred Gibbs, meat salesman, of Charterhouse-street, said that Adams was in the habit of dealing with him. He purchased veal as a rule. "Plenty of times" good meat could be got in the Smithfield market for 2s. to 2s. 4d. a stone.

Mr. Avory.—If so, there is no need to go to a cat's-meat man for meat at that price. Is there, Mr. Gibbs?

The witness said that was a matter for Mr. Adams.

This witness and John May and Frederick Nelson, also meat salesmen, said that they had known the defendant as a most respectable tradesman for many years.

Mr. C. V. Young then addressed the magistrate for Hart, and contended that the evidence did not disclose any sale.

Hart also gave evidence on this point, saying that the meat was only sent for Adams's approval.

In cross-examination, he said that Adams's man saw what he was taking, and there was no obligation on him to take it if he disapproved. It was not true that Adams's van was there the day before. Adams had never returned any meat he had sent for his approval.

Mr. Avory.—I am curious to know where you get this meat from?

The Witness.—All parts.

Yes, but what places?—North, south, east, and west. Liverpool, Manchester, Birmingham, Leeds—in fact from all over the country.

It is not ordinary butcher's meat, is it?—It's too good for cat's meat.

Is it the meat of animals that died from disease?—It comes from beasts that are sometimes slaughtered.

Some die?—Some are slaughtered.

Some die of disease?—Yes, and some meet with accidents.

Mr. Bros, in giving his decision, said it was admitted that Adams gave a sort of standing order to Hart. In doing so he knew perfectly well the kind of meat Hart dealt in. It did not follow, however, that because Hart dealt in cats' meat all the meat he had was not fit for human food, but it was necessary for a man who drew supplies from such a source to exercise the greatest caution. Adams had entered upon this sort of trading, and he must accept the responsibility. There was no doubt in his mind that the meat was for use in Adams's business, and it was not disputed that it was unfit for human food. The only difference between the defendants was that Adams did not see this meat, but Hart did. This food question was one of the very greatest importance to the public, and if there had been anything against either of the defendants before he should have felt bound to have followed the example set in other cases, and sent them to gaol without the option of a fine. On the present occasion each defendant would have to pay £50, or two months' imprisonment in default.

In each case the money was at once paid.

CAMPHORATED OIL ADULTERATION.

At Durham County Police Court, on May 10th, Thomas Curtis, general dealer, Tunhoe Colliery, was summoned under the Food and Drugs Act for selling camphorated oil which was deficient in camphor, and was not compounded with olive oil. Mr. Benjamin S. Elder, inspector of weights and measures, prosecuted, and Mr. Laidler (Darlington) defended.—At the outset, Mr. Laidler stated that defendant pleaded guilty, but he wished to say something in extenuation.—Mr. Elder said he would on that account only give a short outline of the case. On the 7th April, Mr. Wilson, his assistant, called at defendant's house at Tudhoe Colliery and purchased some bottles of camphorated oil. They were obtained from a card marked "Finest quality camphorated oil." The firm supplying them was Holmes and Richmond, of Darlington. A sample was forwarded to the analyst, and his certificate showed that it was not olive oil, but was deficient in camphor to no less an extent than 69.98 per cent. Instead of twenty parts of camphor, there were only six parts. The analyst was unable to state exactly what oil it was. He produced a sample of pure olive oil, and a sample of the oil which defendant offered for sale. Defendant was not in any way responsible for this offence, as the bottles were sealed when he got them. Defendant had acted as one of his (Mr. Elder's) staff in that district. It was the wholesale people again, and not defendant who was to blame.—The Chairman: It is another case of the wholesale people getting off, and the innocent being punished.—Mr. Elder: In the last two cases the whole of the expenses have been paid by the wholesale people.—The Chairman: The only way to punish them is to inflict the full penalty, and let it be recovered from them.—Mr. Laidler said he agreed with Mr. Elder about the real innocence of defendant, although under the statute he was guilty of the offence. Defendant was not a chemist, and took for granted that the articles he sold were made up of the required properties. The bottles were sealed when he got them, and it was unlikely he would tamper with them. Defendant informed him that he had applied to the wholesale firm, but they had absolutely declined to give him any guarantee or pay any expenses. It was true that defendant had his remedy against the wholesale people, but the Bench must remember that defendant had been an honest and reliable dealer for 18 years, and if this case got into the trade journals it might do him considerable harm. He asked them, under the circumstances, not to inflict the full penalty.—The Chairman: He has his remedy against these people.—Mr. Laidler: He would have to go to a higher Court.—Mr. Elder: He has full

power to recover the fine and expenses.—The Chairman: He can go to the County Court. The Bench see no reason to depart from the decision they came to some time ago in these cases, viz., to inflict the full penalty. The retail dealer has got his remedy against the wholesale. A fine of £20 and costs will be inflicted.—Mr. Laidler, in view of defendant attempting to obtain the money from the wholesale people, asked that the time for the payment of the fine should be three months.—The Bench assented.

MARGARINE AS BUTTER.

At Birmingham, on May 12th, James Beeston, 111, Rea-street, was fined 40s. and costs for selling margarine without a printed wrapper, as required by the Act. Defendant said that his wife, who kept the shop, had not got any margarine papers at hand.

COFFEE.

At Birmingham, on May 12th, James Mellor, 314, Cheapside, was fined 10s. and costs for selling coffee containing 25 per cent. of chicory on April 20th. Inspector Jones, in reply to the defendant, said that he had previously taken numerous samples of goods from defendant's shop which were found to be genuine.

THE NEW FOOD AND DRUGS BILL.

Proceedings in Grand Committee.

THE seventh sitting devoted to the Ministerial Food and Drugs Bill by the House of Commons' Grand Committee on Trade was held on May 11th. Mr. J. E. Ellis was in the chair.

Clause 17 was taken up. It provided that a warranty or invoice should not be a defence unless the holder had within seven days after receipt from the prosecuting purchaser of notice of intention to take proceedings given the latter notice of intention to rely on the warranty or invoice. The section further laid it down that such a document given by a person resident outside the United Kingdom should not be available unless the defendant proved that he had taken reasonable steps to ascertain the accuracy of the statement in it.

Mr. Long suggested that in the hope of finishing the Committee's work on the Bill the proposed new clauses should be postponed till the report stage.

Sir J. Cameron and Mr. Kearley, as sponsors for new clauses, accepted this suggestion, to which nobody objected.

Mr. R. G. Webster moved—"That for the purpose of section 25 of the Sale of Food and Drugs Act, 1875, an invoice shall be deemed to be a warranty without the addition of express words of guarantee." This would be a simple prefix to clause 17, now before the Committee; but it was of great importance, because if there was fraud in the preparation of food or drugs it would ensure the tracing of it to its source.

Mr. Long admitted that the Select Committee had recommended the provision which Mr. Webster now put forward, but they had added that it should be limited in time as regarded goods in bulk and perishable articles. The subject must, moreover, be considered from a practical point of view. It would be practically impossible to make the wholesale dealer a party to the prosecution of a retail dealer. Such proceedings arose out of a sale by the retailer, and could not have anything to do with the previous sale, perhaps months before, by the wholesale merchant. A number of practical men had seen him with the view of urging him to accept the amendment, and yet when they came to details they were obliged to admit that in order to transfer responsibility from the retailer to the wholesale man the invoice given by the latter would have

to contain words guaranteeing the purity of the goods sold. That, however, was not what Mr. Webster proposed.

Mr. Ascroft regarded this clause as the most important in the Bill. Every member of the Committee desired to stamp out adulteration, but the question was how to do it. Adulterated foods, to a large extent, came from the importer and the wholesale dealer, the retailer having a very limited share in the process of adulteration. From that point of view the clause was dangerous. The man who distributed adulterated things all over the country was the one who ought to be punished, not the unfortunate shopkeepers, who were his victims. In Mr. Ascroft's constituency there were over one thousand little shops entirely at the mercy of the wholesale dealers. It was said that the wholesale dealer had so many people to deal with that he was practically in their hands, but the shopkeeper was still more in the hands of the wholesale trader. It was not always the case that the wholesale man sent out goods without knowing that they were not as described. Everybody knew that tinned turtle soup was conger eel, sardines nothing but young herrings, and peaches merely prepared turnips.—(Laughter.) The clause created great anxiety all over the country, and Mr. Ascroft earnestly pressed for the adoption of the amendment. He had only one objection to it—it was not strong enough. (Hear, hear.)

Mr. Kearley, supporting the amendment, pointed out that under the Margarine Act an invoice was held to be a good warranty. Why should the Government refuse to establish the same rule in respect of other goods?—(Hear, hear.) It was a most anomalous position. Commercial honesty demanded that in all cases an invoice should be considered a warranty.

Mr. Parkes corroborated the statement that there was a very strong feeling in the country on this subject, and he urged that if the difficulty in the way of the amendment was only technical it should be overcome.

Mr. Brynmor Jones said the President of the Board of Agriculture sought to draw a distinction between a sale with an express warranty and one without such a document. By the Sale of Goods Act, 1892, the goods in every contract of sale must correspond with the description. Suppose that he were a shopkeeper in Swansea and a traveller for a coffee firm called at his shop. He said, "Book me 50lb. of pure coffee." If the coffee when it arrived was found not to be pure he could sue the wholesale house for a breach of contract under the Sale of Goods Act, 1892. Why should he be in a worse position under this Bill? There was no substantial difference between a sale with an express warranty and one without. Unless the amendment were adopted a very anomalous position would be created. (Hear, hear.)

Mr. Hepwood Johnstone thought that if the amendment were adopted it would enable a shopkeeper who had sold adulterated goods to ride off on a pretext which would render the suppression of fraud impossible.

Mr. Beckett could not understand why, if the fraud originated with the wholesale man, he should not be responsible.

Mr. Doughty was in favour of the amendment.

The amendment was carried by 20 votes to 16.

Mr. Long moved that the person by whom the warranty or invoice was alleged to have been given should be entitled to appear and give evidence at the hearing of the charge against the retailer, and the court might, if it thought fit, adjourn the case to enable him to do so.

This was agreed to.

Sir W. Houldsworth called attention to the following amendment placed on the paper by Mr. Galloway:—"If, under the provisions of section 25 of the Food and Drugs Act, 1875, a defendant be discharged from the prosecution, the prosecution shall be entitled to proceed against the person giving the warranty; and, if it be proved that such warranty was untrue, the person so giving the same shall be guilty of giving a false warranty under section 27 of the last-mentioned Act, and it shall not be necessary

to show that such person knew the same to be untrue." Sir William was informed that there was great difficulty in proving the falsity of a warranty, if it was necessary to show, as had been held, that the giver of the warranty knew that the statements in it were untrue. Would the President of the Board of Agriculture consider that point in connection with Mr. Galloway's amendment, which proposed a remedy? (Hear, hear.)

Mr. Long promised that he would do so on report in connection with the amendment which the committee had carried in the recent division.

Mr. Kearley proposed to strike out the words requiring a defendant to prove when using a warranty from a foreign firm that he had taken reasonable steps to ascertain the accuracy of the statement in it.

The amendment, opposed by the Solicitor-General, was negatived by 25 votes to 4.

On Clause 19,

Sir W. Houldsworth, on behalf of Mr. Galloway, proposed an addition to the following passage: "The production by the defendant of a certificate of analysis by a public analyst shall be sufficient evidence of the facts therein stated unless the prosecutor requires that the analyst be called as a witness." The proposed addition was in these words: "And if the defendant shall have forwarded by registered letter to the prosecutor a copy thereof not less than five clear days before such hearing."

Mr. Long assured Sir W. Houldsworth that the amendment would complicate the procedure without conferring any benefit.

The amendment was withdrawn.

The Committee adjourned.

THE Standing Committee of the House of Commons on Trade met again on May 12th, and finally disposed of the Sale of Food and Drugs Bill after discussing a number of proposed new clauses. Mr. John Ellis presided.

Sir C. Cameron moved the insertion of a new clause exempting from any penalty under the Act an employer who could prove to the satisfaction of the Court that he had used due diligence to enforce the execution of the Sale of Food and Drugs Acts, 1875 to 1899, and that another person had committed the offence without his knowledge or connivance, the actual offender in that case being liable.

Mr. Long, on behalf of the Board of Agriculture, opposed the amendment. The principle of it, he admitted, was to be found in the Margarine Act. The amendment, however, would not apply only to the *employé* who was the manager of a shop, but to every *employé* on the premises, and it would be impossible to recover penalties varying from £10 to £15 (not to speak of possible imprisonment) from a shop-boy in receipt of low wages. The committee should adhere to the old principle that the master was responsible for the act of his *employé*. The corresponding clause in the Margarine Act was introduced in one of the final stages of its passage through the House of Lords, and he was sorry it was not rejected in the House of Commons. The fact that it found its way *per incuriam* into the Margarine Act was no reason why it should be introduced into this Bill.

Mr. Bartley was sorry the House of Lords was brought into the discussion, because the question should be considered on its merits. In illustration of the possible hardships which might occur if the amendment were not accepted, he quoted a recent case where A contracted to supply to B pure milk to be delivered at a local railway station. A delivered the milk to the local station, and the milk was adulterated without the knowledge or consent of B during its transfer from the local station to the terminus. A, nevertheless, was convicted, though he had nothing to do with the adulteration.

Sir C. Cameron, in reply to the argument of the President of the Board of Agriculture, asked if the right hon. gentleman wanted to imprison the wrong man.

Mr. T. W. Russell pointed out that the offence under the Margarine Act was not adulteration at all, but related only to marking and branding. If there were adulterated

goods on the premises, the employer, and not the *employé*, had provided them.

After some further discussion the clause was rejected on a division by 20 to 9.

Mr. Bartley moved to insert a definition clause which set forth that for the purposes of the Acts "food" should include every article used for food or drink by man, other than drugs or water, and any article which ordinarily enters into or is used in the composition or preparation of human food, and should also include flavouring matters and condiments.

The clause was agreed to.

On the motion of Mr. Kearley, a new clause was also agreed to, making it an offence to obstruct or bribe an inspector in discharge of his duties, the penalties varying from £20 for a first offence to £100 for third and subsequent offences.

Mr. Kearley moved a clause giving power to any inspector appointed by any local authority or the Local Government Board—(a) At all reasonable times to enter any private or public sale room occupied or used by merchants, brokers, wholesale dealers, or other persons, and any public or private warehouse, factory, store, quay, shed, ship, or barge, where food or drugs are offered for sale or deposited for the purpose of sale or carriage, and to purchase, seize, or procure samples of any food or drugs; (b) to purchase, seize, or procure samples of any food or drugs at the time of delivery, or at any railway station, or other place during transit, or upon the premises of or elsewhere in the possession of any person for the purpose of carriage. He said it had been represented to him that without such a clause there would be considerable evasion of the Act.

Mr. Long opposed the amendment, submitting that it was going a step too far in the direction of interference.

The amendment, after discussion, was defeated by 25 to 6.

Mr. Heywood Johnstone moved a new clause to the effect that no milk containing less than $3\frac{1}{2}$ per cent. by weight of butter fat should be sold, or exposed or offered for sale, under the term "prime milk," under a penalty not exceeding £20.

Mr. Long, while believing that this was a question on which both town and country would come into line, said there was great difference of opinion as to what the right standard ought to be. Milch cows yielded milk that varied in the most remarkable way, even though the average was all that could be desired. Was the percentage to be tested according to every sample or an average of samples? He suggested that his hon. friend should be content with having raised an interesting point which was well worthy of the attention of Parliament, and not press his amendment.

Sir R. Penrose Fitzgerald said "prime milk" might mean anything or nothing. You could manufacture prime milk by putting in the butter qualities.

The amendment was rejected by an almost unanimous vote of the committee, only the mover himself pronouncing for it.

Sir W. Houldsworth moved an amendment to protect the innocent consignee of milk by giving power to the local authority to cause samples to be taken either within or without the district from the same consignor, and further giving power to the local authority to take proceedings against the consignor. At present there was no power for a local authority to analyse milk in a district which was not under their jurisdiction.

Mr. Long admitted that the point was one for which something could be said, but he thought the amendment would defeat the ends of justice. The proposal to give powers to a local authority outside their own area was one which aroused much feeling. There was only one precedent for it, and that was in regard to a metropolitan Act. There the power was guarded in the most careful manner, and, even so, he believed it had never been exercised.

Sir W. Houldsworth suggested that if the power was properly safeguarded in this case there would be no difficulty in the way of different local authorities working together, and he asked the right hon. gentleman to be good enough to consider the matter before the report stage.

Mr. Long said he was quite willing to consider whether it was possible to deal solely with the power of taking supplies.

The amendment was withdrawn.

The Bill as amended was then, amid cheers, ordered to be reported to the House.

CORRESPONDENCE.

MARGARINE WITH TEN PER CENT. BUTTER.

TO THE EDITOR OF *Food and Sanitation*.

Dear Sir,—Allow me to say that you were quite wrong in stating that “there is no analyst in the world who could honestly declare from an analysis made by him that any sample submitted to him contained only 3, 5, 6, 10, 11, or 12 per cent. of butter fat.”

The determination of small quantities, say up to 10 per cent. of butter fat in margarine, presents no difficulties, because margarine, if entirely devoid of butter fat, yields practically no volatile fatty acid, while butter fat, of course, does.

At the time when the German Government contemplated laying down a 3 per cent. limit for butter fat in margarine, several well-known Continental chemists made experiments with the view to ascertain how nearly such small amounts of butter fat could be determined. I have also made experiments, and came to the same conclusion as did Wollny, namely, that the determination of a small percentage, with accuracy sufficient for all practical and legal purposes, presented no difficulties.

It is quite another matter to determine small quantities of *margarine* present in butter, because, as you know well, butter fat varies too widely in its percentage of volatile fatty acids to allow of the sharp line being drawn which is possible at the lower end of the scale.

The discussion whether 6 per cent. or 10 per cent. of butter fat should be allowed in margarine was not so ridiculous as you seem to think, because it involved the great principle whether margarine, churned with milk, should be sold as such, or whether mixturing with butter should be permitted.

Those members of Parliament who contended that the 6 per cent. limit should be adopted chose that figure because in the manufacture of margarine, as now conducted with the use of milk, at most 6 per cent. of butter fat could possibly be introduced with the milk. They did not desire to interfere with any legitimate operation of the margarine manufacturer, but wished to give him to understand plainly that the addition of ready-made butter would not be tolerated.

Government, on the other hand, by upholding the 10 per cent. limit, have neither suppressed mixtures nor materially aided the margarine manufacturer.

I can see nothing absurd and useless, and I can see no folly in the discussion which took place before the Grand Committee on Trade, and I am sure when you come to reconsider the matter you will see that your remarks were somewhat beside the point.—Yours faithfully,

OTTO HEHNER.

[Whatever Mr. Hehner writes on butter analysis is deserving of every respect, but he goes no further than to say with “accuracy sufficient for all practical and

legal purposes,” thus really supporting our view. How define “accuracy sufficient?” Only the other day, at Birmingham, Dr. Alfred Hill found a milk to contain 2.58 of natural fat; but Mr. E. A. Warmington, public analyst for Dudley, found 2.76 of fat in the same milk, whilst Somerset House found 2.47. Some years ago these results would have been regarded as “accuracy sufficient,” but whilst it is generally understood that all public analysts now regard milk containing less than 3 per cent. of fat as adulterated, we have here one declaring a milk of 2.76 as genuine—his figure being curiously enough just one-hundredth of a per cent. above the presumed standard of Somerset House. We have here an instance of what may fairly be taken as “accuracy sufficient,” but how the Dudley people may like milk deficient of at least 26 per cent. of its fat being passed as genuine by their analyst, who is appointed to protect their interests, we do not know. Dr. Bell’s milk analyses in their day were “accuracy sufficient,” but no one knows better than Mr. Hehner how insufficient their accuracy is in the light of present-day knowledge. Analytical science is not an exact one—it is ever progressing, and is deductive. An Act of Parliament is not progressive—the last Food and Drugs Acts have been in operation some twenty and twenty-five years respectively, and we may reasonably assume that it will be twenty-five years before we get an Act to replace the one we hope to see come into operation on January 1st, 1900. Who is to declare that the wily adulterator may not be able to so treat margarine as to baffle even the “accuracy sufficient” knowledge Mr. Hehner declares analysts possess to-day? It is merely a matter of able works-chemists devising means of baffling known tests, and this is being regularly done with various substances. Further, if margarine contains any percentage over 10 per cent. of butter the retailer is liable to prosecution, but Mr. Hehner well knows that it is quite impossible to so evenly mix butter and margarine that every portion shall contain just 10 per cent. of butter. One part may contain 12 per cent., and another only 7 or 8 per cent., but if the 12 per cent. part be sold to the inspector the retailer’s prosecution would ensue. Again, no one knows better than Mr. Hehner how many “experts” there are who for a “consideration” will swear anything. They have for years thwarted his and our efforts to suppress frauds. To our thinking, this 10 per cent. clause will be a rich harvest to them, which traders will have to provide.

It is for these, amongst many other reasons, that we regard that clause as utterly indefensible, and to its advocates we say, “Put yourselves in the place of the retailer—the hardest worked of all shopkeepers, and for the least profit. He is the butt of all; upon him falls the enormous fines or the imprisonment, *i.e.*, practical ruin of trade and character.” It is contrary to the spirit of our law that “accuracy sufficient” should bring any citizen under such penalties and punishment. Further, the retailers themselves have not asked for this 10 per cent. mixturing—they demanded margarine uncoloured or in blocks by a majority in our largest cities and towns. Why, then, is this 10 per cent. forced on them? By the manufacturers, who, by persistent lobbying and monetary interests, have “worked” the Grand Committee.

If Mr. Hehner will reconsider the matter he will see that our remarks are very much to the point. Neither retailer nor consumer have asked for this clause, and it is a scandal that “lobbying” influence should have been sufficiently strong to secure its adoption by the Grand Committee. We hope the House of Commons will assert its dignity and reject it. The lobbying in Rockefellers oil interests was a disgrace to our National Assembly, and the lobbying in this case shows that we are fast reaching the degradation of the American Senate and Congress.—EDITOR.]

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Food and Sanitation.

SATURDAY, MAY 27, 1899.

SPECIAL NOTICE.

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THE NEW SALE OF FOOD AND DRUGS BILL.

Official Text of the Bill as amended in Committee.

THE following is the official text of the Food and Drugs Bill as it left the hands of the Grand Committee:

1. (1) If there is imported into the United Kingdom any of the following articles, namely:—(a) margarine or

margarine cheese, except in packages conspicuously marked "Margarine" or "Margarine Cheese," as the case may require; or (b) adulterated or impoverished butter (other than margarine), or adulterated or impoverished milk or cream, except in packages or cans conspicuously marked with a name or description indicating that the butter or milk or cream has been so treated; or (c) condensed separated or skimmed milk, except in tins or other receptacles which bear a label whereon the words "Separated Milk" or "Skimmed Milk," as the case may require, are printed in large and legible type; the importer shall be liable, on summary conviction, for the first offence to a fine not exceeding twenty pounds, for the second offence to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds. (2) The word "importer" shall include any person who shall, whether as owner, consignor or consignee, agent or broker, be in possession of, or in any wise entitled to, the custody or control of the article. Prosecutions for offences under this section shall be undertaken by the Commissioners of Customs; and subject to the provisions of this Act, this section shall have effect as if it were part of the Customs Consolidation Act, 1876. (3) The Commissioners of Customs shall, in accordance with directions given by the Treasury after consultation with the Board of Agriculture, take such samples of consignments of imported articles of food as may be necessary for the enforcement of the foregoing provisions of this section. (4) Where the Commissioners of Customs take a sample of any consignment in pursuance of such directions, they shall divide it into not less than three parts, and send one part to the importer, and one part to the principal chemist of the Government laboratories, and retain one part. (5) In any proceeding under this section, the certificate of the principal chemist of the result of the analysis shall be sufficient evidence of the facts therein stated, unless the defendant require that the person who made the analysis be called as a witness. (6) If, in any case, the Commissioners of Customs are of opinion that an offence against this section has been committed, they shall communicate to the Board of Agriculture for their information the name of the importer and such other facts as they possess or may obtain as to the destination of the consignment. (7) For the purposes of this section, an article of food shall be deemed to be adulterated or impoverished if it has been mixed with any other substance, or if any part of it has been abstracted so as to affect injuriously its quality, substance, or nature. Provided that an article of food shall not be deemed to be adulterated by reason only of the addition of any preservative or colouring matter of such a nature and in such quantity as not to render the article injurious to health.

2. (1) The Local Government Board may, in relation to any matter appearing to that Board to affect the general interest of the consumers, and the Board of Agriculture may, in relation to any matter appearing to that Board to affect the general interests of agriculture in the United Kingdom, direct an officer of the Local Government Board or the Board of Agriculture, as the case may be, to procure for analysis samples of any article of food, and thereupon the officer shall have all the powers of procuring samples conferred by the Sale of Food and Drugs Acts, and those Acts shall apply as if the officer were an officer authorised to procure samples under the Sale of Food and Drugs Act, 1875, except that (a) the officer procuring the sample shall divide the same into four parts, and shall deal with three of such parts in the manner directed by section 14 of the Sale of Food and Drugs Acts, 1875, as amended by this Act, and shall send the fourth part to the Board; and (b) the fee for analysis shall be payable to the analyst by the local authority of the place where the sample is procured. (2) The Board shall communicate the result of the analysis of any such sample to the local authority, and thereupon there shall be the like duty and power on the part of the local authority to cause proceedings to be taken as if the local authority had caused the analysis to be made.

3. (1) It shall be the duty of every local authority entrusted with the execution of the laws relating to the sale of food and drugs to appoint a public analyst and put in force from time to time as occasion may arise the powers with which they are invested, so as to provide proper securities for the sale of food and drugs in a pure and genuine condition, and in particular to direct their officers to take samples for analysis. (2) If the Board, after communication with a local authority, are of opinion that the local authority have failed to execute or enforce any of the provisions of the Sale of Food and Drugs Acts in relation to any article of food, and that their failure affects the general interests of the consumer, or the general interests of agriculture in the United Kingdom, as the case may be, the Board concerned may, by order, empower an officer of the Board to execute and enforce those provisions, or to procure the execution and enforcement thereof in relation to any article of food mentioned in the order. (3) The expenses incurred by the Board or their officer under any such order shall be treated as expenses incurred by the local authority in the execution of the said Acts, and shall be paid by the local authority to the Board on demand, and in default the Board may recover the amount of the expenses with costs from the local authority. (4) For the purposes of this section an order of the Board shall be conclusive in respect of any default, amount of expenses, or other matter therein stated or appearing. (5) Any public analyst appointed under the Sale of Food and Drugs Acts shall furnish such proof of competency as from time to time be required by regulations which shall be framed by the Local Government Board. (6) References in this or the last preceding section to the Board shall be construed as applying to the Local Government Board or the Board of Agriculture as the case may require.

4. (1) The Board of Agriculture may, after such inquiry as they deem necessary, make regulations for determining what deficiency in any of the normal constituents of genuine milk, cream, butter, or cheese, or what addition of extraneous matter, or proportion of water, in any sample of milk, cream, butter, or cheese, shall for the purposes of the Sale of Food and Drugs Acts raise a presumption, until the contrary is proved, that the milk, cream, butter, or cheese is not genuine, or is injurious to health, and an analyst shall have regard to such regulations in certifying the result of an analysis under those Acts. (2) Any regulations made under this Act shall be notified in the *London Gazette*, and shall also be made known in such other manner as the Board of Agriculture may direct.

5. The provisions of the Margarine Act, 1887, as amended by this Act, shall extend to margarine-cheese, and shall apply accordingly, with the substitution of "margarine-cheese" and "cheese" for "margarine" and "butter."

6. (1) Where under this Act or the Margarine Act, 1887, it is required that any package containing margarine or margarine-cheese shall be branded or marked, the brand or mark shall be on the package itself and not solely on a label, ticket, or other thing attached thereto. (2) The letters required to be printed on the paper wrapper in which margarine or margarine-cheese is sold shall be capital block letters not less than half an inch long and distinctly legible, and no other printed matter shall appear on the wrapper. (3) The words "or with" in section six of the Margarine Act, 1887, shall be repealed.

7. (1) Every occupier of a manufactory of margarine or margarine-cheese, and every wholesale dealer in such substances, shall keep a register showing the quantity and destination of each consignment of such substances sent out from his manufactory or place of business, and this register shall be open to the inspection of any officer of the Board of Agriculture. (2) Any officer of the Board of Agriculture shall have power to enter at all reasonable times any manufactory of margarine or margarine-cheese,

and to inspect any process of manufacture therein, and to take samples for analysis. (3) If any such occupier or dealer—(a) fails to keep such a register, or (b) refuses to produce the register when required to do so by an officer of the Board of Agriculture, or (c) fails to keep the register posted up to date, or (d) wilfully makes any entry in the register which is false in any particular, or (e) fraudulently omits to enter any particular which ought to be entered in the register, he shall be liable on summary conviction, for the first offence, to a fine not exceeding ten pounds, and for any subsequent offence to a fine not exceeding fifty pounds. (4) The provisions of section nine of the Margarine Act, 1887, relating to registration of manufactories shall extend to any premises wherein the business of a wholesale dealer in margarine or margarine-cheese is carried on. (5) The registration of a manufactory or other premises shall be forthwith notified by the local authority to the Board of Agriculture.

8. It shall be unlawful to manufacture, sell, expose, for sale, or import any margarine the fat of which contains more than ten per cent. of butter fat and every person who manufactures, sells, exposes for sale, or imports any margarine which contains more than that percentage shall be guilty of an offence under the Margarine Act, 1887, and any defence which would be a defence under section seven of that Act shall be a defence under this section, and the provisions of the former section shall apply accordingly.

9. Every person who himself or by his servant in any highway or place of public resort sells milk from a vehicle or from a can or other receptacle, shall have inscribed on the vehicle or receptacle his name and address, and in default shall be liable on summary conviction to a fine not exceeding two pounds.

10. In the case of a sample taken of milk in course of delivery, or of margarine or margarine-cheese forwarded by a public conveyance, the person taking the sample shall forward by registered parcel or otherwise a portion of the sample marked, and sealed, or fastened up, to the consignor if his name and address appear on the can or package containing the article sampled.

11. Every tin or other receptacle containing condensed, separated, or skimmed milk must bear a label clearly visible to the purchaser on which the words "separated, milk," or "skimmed milk," as the case may require, are printed in large and legible type, and if any person sells or exposes or offers for sale condensed, separated or skimmed milk in contravention of this section he shall be liable on summary conviction to a fine not exceeding ten pounds.

12. The label referred to in Section 8 of the Sale of Food and Drugs Act, 1875, shall not be deemed to be distinctly and legibly written or printed within the meaning of that section unless it is so written or printed that the notice of mixture given by the label is not obscured by other matter on the label. Provided that nothing in this enactment shall hinder or affect the use of any registered trade mark, or of any label which has been continuously in use for at least seven years before the commencement of this Act; but the Comptroller-General of Patents, Designs, and Trade Marks shall not register any trade mark purporting to describe a mixture unless it complies with the requirements of this enactment.

13. (1) In Section 14 of the Sale of Food and Drugs Act, 1875, the words "offer to" and the words "proceed accordingly and shall" shall be repealed. (2) Section 15 of the same Act shall also be repealed.

14. (1) In Section 16 of the Sale of Food and Drugs Act, 1875, the words "registered parcel" shall be substituted for the words "registered letter." (2) Section 11 of the Post Office Act, 1891, shall be repealed.

15. Any person who wilfully obstructs or impedes any inspector or other officer in the course of his duties under the Sale of Food and Drugs Acts, or by any gratuity, bribe, promise, or other inducement prevents,

or attempts to prevent, the due execution by such inspector or officer of his duty under those Acts, shall be liable, on summary conviction, for the first offence to a fine not exceeding twenty pounds, for the second offence to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds.

16. (1) Where, under any provision of the Sale of Food and Drugs Act, 1875, a person guilty of an offence is liable to a fine which may extend to twenty pounds, he shall be liable for a second offence under the same provision to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds. (2) Where, under any provision of the Sale of Food and Drugs Acts, a person guilty of an offence is liable to a fine exceeding fifty pounds, and the offence, in the opinion of the court was committed by the personal act, default, or negligence of the person accused, that person shall be liable (if the Court is of opinion that a fine will not meet the circumstances of the case) to imprisonment, with or without hard labour, for a period not exceeding three months.

17. Notwithstanding anything in section seventeen of the Sale of Food and Drugs Act, 1875, where any article of food or drug is exposed for sale in an unopened tin or packet duly labelled, no person shall be required to sell it except in the unopened tin or packet in which it is contained.

18. (1) When any article of food or drug has been purchased from any person for test purposes, any prosecution under the Sale of Food and Drugs Acts in respect of the sale thereof shall, notwithstanding anything contained in section 20 of the Sale of Food and Drugs Act, 1875, be instituted within twenty-eight days from the time of the purchase. (2) Particulars of the offence or offences alleged, and also the name of the prosecutor, shall be stated on the summons. (3) A summons shall not be made returnable in less time than fourteen days from the day on which it is served. (4) There must be served with any such summons a copy of any analyst's certificate obtained on behalf of the prosecutor. (5) Section 10 of the Sale of Food and Drugs (Amendment) Act, 1879, is hereby repealed.

19. (1) "For the purpose of Section 25 of the Sale of Food and Drugs Act, 1875, an invoice shall be deemed to be a warranty without the addition of express words of guarantee, but a warranty or invoice shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts unless the defendant has, within seven days after service of the summons, sent to the purchaser a copy of such warranty or invoice with a written notice stating that he intends to rely on the warranty, or invoice, and specifying the name and address of the person from whom he received it, and has also sent a like notice of his intention to such person. (2) The person by whom such warranty or invoice is alleged to have been given shall be entitled to appear at the hearing and to give evidence, and the court may, if they think fit, adjourn the hearing to enable him to do so. (3) A warranty or invoice given by a person resident outside the United Kingdom shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts (unless the defendant proves that he had taken reasonable steps to ascertain and did, in fact, believe in the accuracy of the statement contained in the warranty or invoice). (4) Where the defendant is a servant of the person who purchases the article under a warranty or invoice, he shall, subject to the provisions of this section, be entitled to rely on section 25 of the Sale of Food and Drugs Act, 1875, and section 7 of the Margarine Act of 1887, in the same way as his employer or master would have been entitled to do if he had been the defendant, provided that the servant further proves that he had no reason to believe that the article was otherwise than that demanded by the prosecution."

20. The justices or court referred to in section 22 of the Sale of Food and Drugs Act, 1875, shall, on the

request of either party under that section, cause an article or food or drug to be sent to the Commissioners of Inland Revenue for analysis.

21. At the hearing of the information in any proceeding under the Sale of Food and Drugs Act, the production by the defendant of a certificate of analysis by a public analyst, in the form prescribed by section 18 of the Sale of Food and Drugs Act, 1875, shall be sufficient evidence of the facts therein stated, unless the prosecutor requires that the analyst be called as a witness.

22. All powers and duties vested in or imposed on the Secretary for Scotland for the Sale of Food and Drugs Act, shall be invested in or imposed on the Local Government Board for Scotland.

23. This Act shall apply to Ireland with the substitution for the "Board of Agriculture" of "the Lord Lieutenant acting by the advice of the Privy Council." And for "the Local Government Board" of the Local Government Board for Ireland.

24. In this Act unless the context otherwise requires, the expression "margarine-cheese" means any substance whether compound or otherwise, which is prepared, in imitation of cheese, and which contains fat not derived from milk. The expression "cheese" means the substance usually known as cheese, containing no fat derived otherwise than from milk. The expression "local authority" means any local authority authorised to appoint an analyst for the purposes of the Sale of Food and Drugs Acts, and the expression "public analyst" means an analyst appointed. Other expressions have the same meaning as in the Sale of Food and Drugs Acts, and an offence under this Act shall be treated as an offence under those Acts.

25. (1) For the purposes of the Sale of Food and Drugs Acts the expression "food" shall include every article used for food or drink by man other than drugs or water, and any article which ordinarily enters into or is used in the composition or preparation of human food, and shall also include flavouring matters and condiments. (2) The definition of food contained in section 2 of the Sale of Food and Drugs Act, 1875, is hereby repealed.

26. (1) This Act may be cited as the Sale of Food and Drugs Act, 1899, and the Sale of Food and Drugs Act, 1875, and the Sale of Food and Drugs Act Amendment Act, 1879, and the Margarine Act, 1887, and this Act may be cited collectively as the Sale of Food and Drugs Acts, 1875 to 1899, and are in this Act referred to as the Sale and Drugs Acts. (2) This Act shall come into operation on the first day of January, 1900.

ADULTERATED MILK OF SULPHUR.

At the Leeds City Police Court on May 16th, before the Stipendiary Magistrate (Mr. C. M. Atkinson), Thomas Sawyers, grocer, of 2, Longclose Lane, Leeds, was summoned for selling 3oz. of milk of sulphur which was adulterated with 62 per cent. of lime. He pleaded that he sold the sulphur in the same condition as he received it. In inflicting a fine of 10s. the Magistrate advised the defendant to obtain a warranty when purchasing goods in future. For a similar offence, in respect of which the same defence was set up, John Tarley, grocer, 29, Sussex Street, Bank, Leeds, was also fined 10s.

At Leeds Police Court on May 19th, Mrs. Harrod, 8, Christopher-road, Woodhouse, was charged with selling 3oz. of milk of sulphur to W. B. Walker, the Food Inspector, on April 11th, which the city analyst certified to contain 76 per cent. of sulphate of lime. A fine of 10s. was imposed.—Henry John Clarke, 30, Upper Accommodation-road, was also charged with selling the same article, which contained 62 per cent. of sulphate of lime. He was likewise fined 10s.—His Worship said there was no reflection on the characters of these defendants, for they evidently did not know the composition of this milk

of sulphur, but it was advisable that dealers and others should note these proceedings for they should deal more severely with similar cases in the future.

Mr. Jolliffe, Deputy Town Clerk, prosecuted in all cases.

REFUSING TO SELL FOR ANALYSIS.

A CASE in which much interest was taken was heard at Youghal Petty Sessions on May 15th, Sergeant J. T. Heggart, Inspector of Foods and Drugs, charged John Meade with refusing to sell him a sample of butter for the purposes of analysis.—Mr. J. L. Keane defended.—Complainant deposed that on April 27th he received information that defendant was selling butter through the town at half the market price. He met him in the shop where he had the butter, and asked him was he selling it, and he said yes. Witness said he was Inspector under the Food and Drugs Act, and that he required him to sell him a sample. Witness was in uniform. Defendant said he would not sell it, but he could take it if he liked. Witness then offered him payment and told defendant that he would be liable to a heavy penalty if he refused.—Mr. Keane: You are an Inspector under the Food and Drugs Act—let me see your appointment.—The sergeant having handed Mr. Keane his appointment by the Grand Jury.—Mr. Keane: Is this your only appointment. I am entitled to act under the Weights and Measures Act.—Mr. Keane: This is an appointment by a defunct body—the Grand Jury.—The Chairman: I hold, and I advise my brother magistrates, that that appointment holds good until he is removed from office.—Mr. Keane argued that, inasmuch as the Grand Jury had died, every office under it died with it, unless the statute that killed the Grand Jury revived them and transferred them to another body, and the sergeant's office was not specified in the Act.—Sergeant Heggart said that being Inspector of Weights and Measures, he was entitled to act.—Mr. Keane: In the summons the sergeant figures as Inspector under the Food and Drugs Act, and the summons must stand or fall by that. Am I to understand that the sergeant relies on a double-barrelled position.—Mr. Keane having argued the point at some length and quoted from the Local Government Act, the Chairman said: I hold that the point put before us by Mr. Keane is untenable. The sergeant is appointed from the Constabulary to perform certain functions. He is not an officer of the Grand Jury, and never was. He was nominated by them to perform certain functions under the Food and Drugs Act, and that appointment holds good until he is removed.—Ultimately the Bench, by a majority of four to three, ruled against Mr. Keane.—Mr. Keane argued at some length that the property in the butter had passed from his client to Mr. Collins before the sergeant asked for the sample. This was proved by the evidence of the defendant and corroborated by the witness for the prosecution, and, furthermore, there was no proper tender of payment by the sergeant.—The Chairman said that the case they had dismissed, and very properly dismissed, for they were unanimous in dismissing it, was conducted by Sergeant Heggart with great skill and great ability, and in a manner bringing credit to himself and reflecting credit on the police. They were sorry he did not succeed, but they were utterly satisfied with his action in the matter. It was not the first time they had to commend his conduct.

MARGARINE AS BUTTER.

At Salford, on May 17th, a wholesale grocer, named Owen Doherty, carrying on business at Greengate, Salford, was summoned, under the Food and Drugs Act, for selling margarine as butter. Evidence was given by Inspector Crossley, that on the 10th April, he visited the shop of James Edward Martin, Chapel-street, Salford, and purchased some butter, for which he paid 1s. 1d. per lb. In consequence of what was then stated, witness and Miss Martin went to the shop of Owen, who had supplied them

with the article. Miss Martin made a purchase from a stand labelled "Pure butter, 10d. per lb." This was found to be margarine. The defendant did not dispute the facts, and the Stipendiary inflicted a fine of £15 and costs. Mr. Desquesnes appeared for the defendant. Martin, who had not received a warrant from Doherty, was ordered to pay 20s. and costs.

JAMES BRADSHAW, of Borough-road, Pendleton, was summoned for selling unlabelled margarine, and was fined 20s. and costs. Inspector Crossley proved the case.

A WIDOW, named Charlotte Kirkwood, of Brindleheath-road, Pendleton, was fined 20s. and costs for selling margarine as butter. The defendant said that she purchased the butter from Mr. Doherty, in Shudehill Market, and paid 10d. per lb., and sold it at 1s. She did not get a warrant. Mr. Desquesnes, who watched the case on behalf of Mr. Doherty, said that his instructions were a complete denial. The Stipendiary remarked that he had no sympathy with retail grocers who did not receive a warrant. He was inclined to believe that some of these small tradespeople somewhat willingly allowed themselves to participate in a fraud. Mr. L. C. Evans conducted the prosecution on behalf of the Corporation.

FINES to the total amount of over £53 were imposed in the London Police Courts, on May 17th, on tradesmen convicted of palming off margarine on their customers as butter. As usual, most of the offenders had unmistakably Welsh names.

Mr. Cluer, the magistrate at Worship-street, who is himself a Welshman, is grieved by these lapses into dishonesty on the part of his countrymen. He had before him, one Annie Jones, of 200, Three Colts-lane, who was convicted of selling as butter, a certain grease adulterated with only 12 per cent. of the real article. The premises have become so notorious from many similar prosecutions there, that the name has been altered to avoid proof of previous convictions—a subterfuge which is fairly common in the trade.

"I don't know," said his Worship, more in sorrow than in anger, "why Welshmen have taken to the dairy business to defraud and poison Londoners, but it is so, and I am ashamed of my countrymen. I shall impose the full penalty—£20 and five guineas costs."

At Lambeth, on May 18th, H. Boys, of Wyndham-road, was summoned by Inspector Perrin, on behalf of the Lambeth vestry, for selling as butter a mixture containing 70 per cent. of margarine. The defendant said the sample was served by his daughter, who made a mistake. Samples had been taken before, and had always been found to be correct. Mr. Denman ordered the defendant to pay a fine of £5 and costs.

At Dublin, on May 18th, before Mr. Swift, Patrick Mullen, provision dealer, 30, Francis-street, was fined £3 for having margarine exposed for sale without being labelled. Mary Conlan, provision dealer, 26, Meath-street, was fined £3 for having margarine exposed for sale without being labelled.

MILK WARRANTIES.

At Bow Street on May 17th, the Sudbury Dairy Company, Broad-street, were summoned for selling milk from which 13 per cent. of fat had been extracted.—Mr. H. C. Jones supported the summons on behalf of the St. Giles' Board of Works: Mr. Ricketts defended.—Mr. Jones said he understood that a warrant would be put in for the defence: but, as the same thing was done in almost every instance, he was bound to go on with the case.—Formal evidence was then given as to the purchase of the milk in question by William Henry Bond, an inspector in the employ of the St. Giles' Board of Works.—Mr. Ricketts said that a warrant was the only means by which an honest trader could protect himself from the wrong-doing of others. The defendants in this case had done all in

their power to secure pure milk. They took the milk in question from a farmer in Rutland, the arrangement being by letter, and in each churn there was a label signed by the farmer, guaranteeing that the contents were "pure, new, and unskimmed milk." They could do no more, and it was evident that the Legislature intended that persons in the position of the defendants should be protected where warranties were obtained.—Evidence was then given to show that the churns supplied to the defendants had attached to them a label as described by Mr. Ricketts.—The manager of the defendant company said the agreement with the farmer was by letter, and the farmer was told that his milk would not be accepted unless each churn was accompanied by a label declaring it to be "pure, new, and unskimmed milk."—Mr. Jones contended that there was not sufficient to show that there was a contract between the parties, and cited cases in support of his argument.—Sir James Vaughan adjourned the case in order that he might consider the matter.—Mr. Jones said that in any remarks he had made about warranties he did not intend to reflect on Mr. Ricketts or the defendants.—A summons against Henry Hanson, of New-yard, Great Queen-street, who was summoned for selling milk from which 12·6 per cent. of its fat had been abstracted, was also adjourned, it being understood that the same defence would be raised.

SAND OR NUTMEG?

At Liverpool on May 17th, before Mr. Kinghorn, the deputy stipendiary, Arthur Ainsworth was summoned for having sold mixed spice, which contained, according to analysis, 4 per cent. of sand. The spice was in a packet, and the defence was that it had been sold as received from the manufacturers. A letter from the latter was put in, stating that the analyst must have mistaken the powdered nutmeg shell for sand.

Mr. Kinghorn thought most analysts could discriminate without difficulty between nutmeg and sand.

Mr. Cripps, the prosecuting solicitor, proposed an adjournment for the purpose of bringing the manufacturers to court. If they were convicted he would withdraw the summons against the present defendant, who was clearly innocent.

The case was adjourned accordingly.

MILK ADULTERATION.

THE Callow-park Dairy Company was summoned at Liverpool on May 17th, for having sold a pint of milk which had been slighted watered and deprived of nearly a third of its cream. Mr. Cripps prosecuted, and produced an analyst's certificate showing the quality of the milk, which an inspector deposed to having purchased in the usual way.

Mr. A. J. Mockay defended, and stated that the Callow-park Dairy Company was one of the largest purveyors of milk in the country. On the date in question they ran short of milk and purchased forty gallons from another firm in the city in whom they had every confidence. The milk was taken from the railway station as it had been delivered, and was in cans with a warranty as to its purity and quality. They admitted that something must have been wrong with the milk, but those were the circumstances under which the defendants came to sell it.

Mr. Cripps said he would like the deputy stipendiary to ask what the defendants paid for the milk.

The Representative who appeared for the Company asserted that the usual trade price was paid.

Mr. Cripps said he understood that they paid 6½d. per gallon in some cases.

The Company's Representative said that was a fair price.

A fine of 10s. and costs was inflicted, or £1 5s. altogether.

EXCESS WATER IN BUTTER.

GEORGE VENNER, of Taunton, was, on May 18th, charged with selling in Tiverton Market butter adulterated with 10 per cent. of water. The case had been adjourned to allow a sample being submitted to Somerset House for analysis.—The Borough analyst found 30 per cent. of water in the butter, the Government analyst 32·8. The average is 12 to 16.—Mr. C. P. Clarke, for the defence, pointed out that there had been no noxious adulteration. There must have been a slight carelessness in not sufficiently pressing out the water.—The Bench were of opinion that the water was added to fraudulently increase the weight of the butter, and had no hesitation in inflicting a fine of £5 and costs. That being the first case of the kind before them, they had not imposed the full penalty of £20.

ADULTERATED OLIVE OIL.

At West London Police Court on May 19th there was an adjourned summons, before Mr. Rose, against King and Mortimer (Limited), of Palmerston-building, Old Broad-street, issued at the instance of the Fulham Vestry under the Food and Drugs Act, in respect of the sale of olive oil to an inspector, found to contain 70 per cent. of oil other than that of olive.

Mr. Blanco White supported the summons on behalf of the vestry, and Mr. Montague Shearman, barrister appeared for the firm.

It was alleged that the vestry's inspector, who had special instructions, went to one of the firm's shops in North-end and asked for a flask of olive oil, when he was served, and paid 4½d. for it. When the assistant who supplied the flask heard that the oil was purchased for analysis, he said the inspector did not ask for olive oil but for oil. Dr. Jackson, the medical officer of health, who gave evidence at the first hearing, described it as an imitation of an Italian flask. For the firm it was contended that a flask of oil was a well-known article in the trade, not used for food, but for cleaning purposes, and it was also stated that salad oil was always sold in bottles.

Mr. Alfred Moody, who had twenty years' experience, was recalled, and said he never knew olive oil to be sold in flasks.

Mr. White produced a price list of the firm procured by Dr. Jackson at one of the shops, wherein it was set forth "Oil in flask, fine oil."

Dr. Jackson, in proving the list, said he asked for a flask of olive oil and received it.

Mr. Shearman objected to the evidence, which he said was wholly irrelevant. It was taking an advantage of an adjournment to pile up evidence for another case.

Replying to Mr. Shearman, Dr. Jackson said he had not been to any expert with reference to olive oil being sold in flasks.

Mr. Shearman argued that there was no evidence of a sale on a price list of any description, and said the point which the magistrate had to determine was whether the inspector called for a flask of oil. It was a bona fide mistake.

Mr. Rose believed the inspector asked for a flask of olive oil and got a flask which was not olive oil. He was surprised to hear that olive oil was not sold in flask, but in the firm's own price list they were prepared to sell olive oil in flask. He fined the defendants £5, with £1 13s. 6d. costs.

A summons against the assistant who sold the flask was withdrawn.

ANTISEPTICS IN FOOD.

By ALFRED HILL, M.D., F.R.S., Edin. F.I.C.,
Medical Officer of Health of Birmingham.

THE adulteration of food is a practice of great antiquity, and consisted originally of very simple methods. With the advance of scientific knowledge, however, the methods of falsification employed became more numerous, more complex, and more difficult of detection, so that science, having been pressed into the service of adulteration, the resources of science are now fully taxed in the endeavour to detect it in some of its more recondite forms.

When Accum wrote his book, "Death in the Pot," simple adulterations were common enough, but the means of detecting them were then very imperfect. Dr. Hassall, by his works published by himself, and those carried out by him in connection with the Analytical Sanitary Commission of the *Lancet* between forty and fifty years ago, and particularly by the use he made of the microscope, gave to the means of detection a development which proved of great value in unmasking many of the adulterations practised, which up to that time did not admit of being made out with precision and certainty.

The passing of the Adulteration Act in 1860 led to the appointment of public analysts, whose labours have resulted in processes of great certainty and delicacy, so that adulteration at the present time, combated as it is by the application of physical, chemical, and optical science, is detected with a degree, of completeness not dreamt of forty and fifty years ago.

I am not, however, concerned this evening with adulteration in its general aspect, but with that form of it which has of late years become so common, namely, the addition of antiseptics to perishable articles of food and drink, and, in response to your invitation, I have pleasure in submitting a few remarks on the subject embodying the researches, observations, and opinions of some leading physicians, physiological experimenters, and bacteriologists, together with my own experience as a public analyst.

My paper is not to be regarded as dealing at all thoroughly with the subject, which, I need hardly say, is exceedingly wide and varied, but is intended to constitute such a statement of certain points of the question as shall serve the purpose of an introduction to a discussion of it by this meeting.

During the three years ending March, 1899, 2,300 of the samples of food received by me as Public Analyst for the city of Birmingham have been examined for preservatives. In 460 instances, or 20 per cent., boric acid, formic aldehyde, or salicylic acid have been detected. This fact will show that the use of preservatives in food has risen to very large dimensions, and requires serious consideration by all interested in the health of the community.

Boric Acid was found in 35 per cent. of the 882 samples of butter and margarine, and in 15 of the 24 samples of bacon, sausage, and other animal foods. For preservative purposes, a mixture of boric acid and borax is generally used. Samples of butter analyzed this year have contained quantities of boric acid varying from 7 to 84 grains per lb., or from 0.1 to 1.2 per cent.

Butter is brought here from Australia in excellent condition, a distance of about 15,000 miles, without the addition of any preservative whatever, simply protected by a low temperature. It is not, then, unreasonable to suppose that it is necessary to heavily drug butter from Cork, or from the Continent of Europe, about 200 miles off, a distance occupying only a few hours to transit? This simple question is answered emphatically in the affirmative by the fact that not all the butter from these places is so drugged, but only some of it.

In fact, as I mentioned before, two-thirds of the samples of butter and margarine examined in Birmingham were found to be free from boric acid. In a large proportion of the samples which contained this acid, the amount

present did not exceed 0.3 per cent., or 21 grains per lb.; if this quantity is sufficient, why should 70 grains and upwards per lb. be used? When the quantity of preservative is greater than the water present can dissolve, the boric acid is in the solid state, and useless as a preservative, and microscopical examination in these cases shows the presence of crystals of boric acid.

What information have we as to the effect of boric acid and borax on health? Several surgical cases have been reported by Moldenkow, Hogner, Welch, Lemoine, and others, in which the use of these drugs has produced serious and even fatal results. A number of experiments have been made on men and animals by Mattern, Förster, Lelenker, and Chittenden, with the result that they all found that smaller or larger doses interfered with digestion and nutrition. The *Lancet*, on January 2nd, 1897, published the opinions of a number of eminent medical men on this subject, who appeared generally to regard the use of preservatives with suspicion and disapproval, as liable to produce deleterious effects. The *British Medical Journal*, on January 28th, 1899, published the experience of Dr. J. Jameson Evans, of Birmingham, who found the continued use of boric acid in cases of cystitis and urethritis produced an erythema, followed by a fine scaly exfoliation. In one case, where the drug was given in doses of 10 to 20 grains three times a day for five weeks the patient became perfectly bald. Professor D. J. Leech, of Manchester, has recently (August 8th, 1898) expressed the following opinion: "It appears to me that many patients can take either boric acid or borax for a long time in very large doses with impunity, but that in some people the unpleasant results are produced by comparatively small quantities, and it is quite possible that serious harm might in these cases follow its ingestion in the quantities in which it is used in the preservation of food. There can be no doubt that it should not be used in the preservation of milk." This last opinion was given at the request of Dr. J. Niven, the Medical Officer of Health of Manchester, who also quotes that of Professor Dixon Mann, as follows: "I have seen several cases in which a purpuric eruption, with nausea, loss of appetite, and depression, followed the dressing of open wounds with boric ointment. . . . I can remember two cases in which thrush in infants was treated with honey and borax, and the application continued long after the aphthæ had disappeared. Nutrition was so much impaired as to cause great emaciation, with intestinal irritation and diarrhœa. . . . I am strongly of opinion that the most stringent restrictions are needed in respect of milk, as being the food of infants and young children, whose nutrition would be seriously impaired by the prolonged ingestion of boric acid, or its compounds, even in small amount."

I have quoted these recent opinions somewhat fully, believing that they may be new to some of my audience.

A curious meat-preservative was exhibited at a meeting of the Society of Public Analysts last year by Mr. A. C. Chapman, F.I.C. It was a real curiosity in its way, for it contained alum, salt, sodium nitrate, sulphurous acid, chloral hydrate, benzoic acid, and a small quantity of iodine! This shows what food preservation may come to.

In 5 per cent. of 1,360 samples of milk I examined boric acid was found in quantities varying from 130 grains per gallon to 3 grains or less. When the former case came before the magistrates the defendant admitted that he had added a *solid* preservative to the milk. This illustrates the danger that the preservative may not be properly dissolved and incorporated with the food, but may be present in excessive quantities in part of it.

Five out of eight samples of cream were preserved with boric acid. In one case salicylic acid was also present.

Even if we were to assume that the quantity of boric acid used to preserve each of the various foods I have mentioned was not sufficient to effect the health of the consumer when taken alone, we have to consider that

there is the possibility that our butter, bacon, sausage, milk, and cream may each contain boric acid, and that the aggregate amount of the drug taken may attain serious proportions.

Quite recently a new food-preservative has come into use, and for various reasons, it has largely superseded boric acid. It is in the liquid form, and a very small quantity suffices. I refer to formic aldehyde, which I have detected in 47 out of 1,000 samples of milk examined. What are its effects on the animal economy and on food tissues?

F. D. Simons says that in his experiments it retarded pancreatic digestion, and Weigle and Merkel say that it renders the albuminoids of milk less digestible, an addition of one part of formalin to 500 of milk rendering the casein insoluble in pepsin and hydrochloric acid. This is a serious indictment, and it shows a retarding influence on the digestion of both animal and vegetable food, proteids, and amyloids.

Attempts to preserve fish by means of formalin failed on account of its hardening effect. This was apparently due to the coagulation of the albuminoids, the samples being made so hard as to be rendered unsaleable, even by solutions containing only one part of formic aldehyde in 5,000.

According to Rideal, 1 oz. of formaldehyde (equal to $2\frac{1}{2}$ oz., 40 per cent., formalin) does the work of 5 lb. of borax and boracic acid, so that if a very small addition be sufficient, its greater potency makes up for its smaller quantity.

There has recently been a prosecution in Liverpool in a case of milk containing this antiseptic, when it was contended by the prosecution that milk did not need any preservative, that the use of formic aldehyde enabled a dealer to sell stale milk as fresh, and obviated the necessity of cleanliness of the dairy. It was also contended that it made the milk indigestible, and had an irritant action on the mucous membranes. Professor Boyce, of the University College, and Mr. Williams, the Public Analyst, asserted that formalin in milk was quite unnecessary, and most objectionable. Mr. Davies, analytical chemist, and Dr. Barrow were called for the defence, and expressed the opinion that the amount of formalin said to have been used would not be injurious to health. The Stipendiary Magistrate expressed himself, however, as on the side of the cow against the chemist, and inflicted a fine of £5 and costs. Notice of appeal was given, but was subsequently withdrawn.

For the reason that milk is the one perfect food, especially valuable for invalids and children, it is the food which, above all others, ought not to be tampered with. It is true that milk soon changes; it does not keep indefinitely, and evidently Nature did not intend it to do so. The young of all mammals naturally receive it directly from the mother, and the more directly we all of us obtain it the better. It is only the ingenuity of man which is exercised to circumvent natural law in this connection, and as long as this is done without medication and adulteration, there is no objection, and happily, we know safe means of doing it. It is admitted that the decomposition of milk does not occur in properly conducted dairies under forty-eight hours, which should be long enough to allow of its distribution, and where it is found necessary to add antiseptics to make it keep so long, it is because the treatment of it is careless or dirty, or otherwise bad, so that preservatives are often added to the milk of our dairies to compensate for the faults of its treatment, which our supineness only encourages. An argument of considerable force against the prevention of change in milk by added chemicals is furnished by the circumstance that morbid milk, whether by itself or mixed with normal milk, very soon changes, and such premature change is of the greatest value as an indication of the unhealthy condition of the milk, and a signal to direct attention to its cause. If the addition of chemicals to food were

necessary, some favourable consideration might be given to it, but it is not necessary, as is proved by the fact that it is only used to a limited extent.

Another antiseptic which has been much used, but to a less extent in this country than abroad, is salicylic acid. I have found it in creams, in jams, and in spirituous compounds.

Salicylic acid was detected in five out of six samples of jam which I examined, in five out of eleven samples of ipecacuanha wine, and in one sample out of twelve of sherry. In four of the six wines the proper quantity of alcohol was not present, the cheaper salicylic acid having been used to replace it. According to F. D. Simons, salicylic acid retarded peptic digestion, and Chittenden observed that salicylate of soda and borax act antagonistically to the digestive ferment.

Though not very poisonous in moderate doses and in dilute solution, yet in large doses it is said to produce serious cerebral symptoms, and it is well-known to medical practitioners to produce in medicinal doses headache, deafness, ringing in the ears, and loss of appetite. French authors especially call attention to its injurious action in diseases of the kidneys, and to its slow elimination in aged persons.

In a paper read before the Franklin Institute on December 20th, 1898, H. Leffmann stated that, after a number of experiments, he had come to the conclusion that "salicylic acid in all its forms, *i.e.*, natural, crude commercial, and refined commercial, is distinctly antagonistic to most enzymes, especially those that convert starch. He found that, to use his own words, "Sodium benzoate (another antiseptic sometimes used in foods) is without appreciable interfering action, and as its preservative action is undoubted, and its disagreeable taste will prevent its liberal use in any food article, it seems to be well adapted for general use."

One of the pleas of persons using preservatives is that they are not seen to produce bad effects, that they are commonly taken as remedies, and are as harmless as useful. But this is begging the whole question, and disposing off-hand of the problem awaiting solution.

If bad effects are not traceable at once, and to single doses or small quantities, no proof is thus afforded that the continued use is harmless. If the substances be used as remedies, it must be evident that the conditions under which they are given are totally different. As remedies they are given for a special curative purpose to persons out of health accepting them voluntarily, and they are only used for a limited time; their dose is carefully regulated, and they are given under professional advice and supervision. If mixed with food the conditions are altogether different; there is no curative object, for the consumers are not necessarily ill—they take the substance without requiring it, and involuntarily, without even knowing of it, and for an indefinite time. There is no regulation to the dose, which is found to vary very widely, and the substance is administered by lay persons having no knowledge of its nature or the bodily condition of those made to swallow it.

On the legal side of the subject one fact appears to stand out with great distinctness, and that is that the sale of milk or other food containing preservatives without a distinctive label is a "sale to the prejudice of the purchaser" of an article of food "which is not of the nature substance, and quality of the article demanded by the purchaser, and that the vendor has been guilty of an offence under section 6 of the Sale of Food and Drugs Act, 1875. In practice the question of quantity comes in, and authorities find a great difficulty in deciding what is the minimum quantity of preservative for which a prosecution shall be instituted.

The Government Sale of Food and Drugs Bill introduced into Parliament this year, in Clause 4 proposes that "The Board of Agriculture may, after such inquiry as

they deem necessary, make regulations for determining . . . what addition of extraneous matter in any sample of milk, butter, or cheese, shall, for the purposes of the Sale of Food and Drugs Act, raise a presumption, until the contrary is proved, that the milk, butter, or cheese is not genuine." This would be a step in the right direction, though it does not nearly cover the question of preservatives in food generally, and some question may be raised as to the suitability of the Board of Agriculture for such a task.

Clause 38 of the Bill brought in by Messrs. Kearley, Maurice Healy, and others, provides that "There shall be appointed a Board of Reference . . . and the powers and duties of such Board shall . . . include . . . the power to settle and appoint standards of the amount and kind (if any) of foreign substances to be allowed for the preservation or flavouring of foods." This is an excellent suggestion, and is on the same lines as the recommendation of the establishment of a Court of Reference by the recent Food Products Committee.

In the meantime, for Governmental action is deliberate if not slow, we have at our command a means of food preservation which is available for every kind of food, and is open to none of the objections that attach to the material antiseptics. I mean refrigeration. I have referred to butter brought in excellent condition from Australia without any admixture, but merely under the influence of a low temperature, and the same agency is employed for the preservation of enormous quantities of meat from Australasia, the Argentine Republic, and the United States. In our towns the fishmongers preserve their goods for a long time in their ice-wells, and in most large centres of population refrigerating stores are provided for various kinds of food. The method possesses the following advantages: It proves to be more effective than any other. It adds nothing, and takes away nothing, not even water, in no material sense altering the quality of the article treated. Lastly, it causes no change of appearance or taste, leaving the meat or other substance substantially in its original condition, neither rendering it less nutritious nor less digestible.

In making the foregoing remarks, I have a full consciousness of the superficial treatment which a very wide subject has received at my hands; but my object has been, not so much to do full justice to it as to put before you certain facts and opinions, as well as my own experience, on which to base a discussion. It is a subject of great professional interest, because of its unquestionable sanitary importance, and it is one respecting which you must feel much personal interest, and concerning which no doubt some of you have had valuable experience. It is, moreover, a question which a Society like ours, consisting of men whose chief occupation is to promote and protect public health, may reasonably be expected to take seriously into consideration, and possibly, in due course, united action.

TO PROHIBIT THE SALE OF DISEASE DISTRIBUTION BY OYSTERS.

In the House of Lords, on May 18th, Lord Harris moved the second reading of the Oysters Bill, which, he said, was another step to legislative progress which endeavoured to make more sanitary the surroundings of the creatures applied as food for man. The Local Government Board had been induced to bring forward this Bill owing to the very grave suspicion which had attached to oysters of late years. The Bill provided for the inspection by the Council of any county or borough of oyster layings, and prohibition of removal for sale from insanitary layings. There was also power given to the Local Government Board to act in default of the local authority. The necessity for legislation had been amply demonstrated, and the measure was one which had the support of every large town in the United Kingdom.

The Bill was read a second time.

DAILY TELEGRAPH BUNKUM ON ADULTERATION.

THAT trite old saying "There is death in the pot" would seem to be applicable says the *Daily Telegraph*, to every known variety of receptacle at present used for the conveyance of adulterated food from the United States of America to this mercilessly victimised country. A telegram from Chicago apprises the British public—to its inevitable dismay and consternation—that the committee appointed in that city of infinite contrivances to examine the nutritive substances now being exported to England has arrived at some of the most alarming conclusions that have ever heretofore resulted from scientific investigation. Official analysts have made the appalling discovery that tarred rope is freely utilised in the manufacture of the ginger of commerce; that pulverised clay is lavishly mixed with the flour supplied to unsuspecting Britons "for household use." Corn-starch figures as a copious adulterant of powdered sugar; ground-up cocoanut shells are extensively sold as prime buck-wheat flour; jellies are made of apple-cores and parings blended with glucose; and butter is compounded of tallow and marrow. Condensed milk, on the other hand, is preserved by means of wood-alcohol, which—being strenuously poisonous—is admirably calculated to abridge the lives of its unwary consumers. Despite the recent recrudescence of Anglo-American amity, and its tempting promise of an informal alliance, in the coming by and by, between the two great English-speaking nations, we are only too well aware that the time-worn axiom, "There is no friendship in business," still holds good on both sides of the Atlantic, and will probably continue to do so until the crack of doom. Nevertheless, we cannot help thinking that those of our American cousins who occupy themselves with the preparation of food intended for our consumption might temper adulteration with mercy. Paraphrasing a familiar old couplet, we would say to these unkindly kinsfolk: "Perhaps you are right to mix clay with our flour, But why do you poison our milk?"—[It is a pity such ignorant drivel finds its way into print].—EDITOR.

THE NEW FOOD AND DRUGS BILL.

Several important amendments are to be moved to the Food and Drugs Bill on the report stage, says the *Pall Mall Gazette*, on points that were defeated in the Grand Committee. The attempt will again be made to render a grocer's or chemist's assistant liable for infringements of the Act which he may commit in defiance of the instructions of his employer. Mr. Kearley will again move that a notification of conviction shall, after a second offence, be affixed to the premises of the offender, and the member for Devonport will rely for success in arguing this point upon the fact that a similar provision is contained in the 47th Section of the Public Health Act. It will be further sought to reduce the proportion of margarine allowable in butter mixtures from 10 to 6 per cent. As to the points on which Mr. Long was defeated by small majorities in the Committee, these will be allowed by him to stand. They include the important provision that the invoice shall be accepted as a warranty by the wholesaler to the retailer.

THE PURITY OF HALIFAX FOOD AND DRUGS.

THE Halifax Borough Analyst (Mr. W. Ackroyd) in his annual report says that he has analysed 211 samples of food and drugs, the largest number of samples being of milk, butter, and margarine. Of the total, 197 were genuine, 7 adulterated, and 7 were doubtful. Of 12 samples of water he had analysed, 1 furnished an example of a danger to health, which he had reason to believe was far too common. At the well where the water was obtained, a leaden pump-shaft was used; these ought to be abolished, as well-water had marked lead dissolving properties; such water—bright, clear, and outwardly inviting in appearance—might have within it the insidious qualities of plumbism.

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Food and Sanitation.

SATURDAY, JUNE 3, 1899.

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THE FLASH POINT OF PETROLEUM.

If we are to believe the *Daily Telegraph*, Mr. Rockefeller's millions have triumphed, and arson, dynamite, perjury and bribery, are to receive the free licence of our Government, and the House of Commons is to be asked to become the tool of the wealthiest dynamitard unhung.

In an obviously inspired article, our esteemed contemporary states that:

"Her Majesty's Government are expected very soon to lay before the House of Commons their proposals for dealing with the vexed question of petroleum. On the surface this does not seem to be a topic of thrilling interest, but it is all the same one of vast practical and social import. The measure will be entrusted to Mr. Jesse Collings, Under-Secretary of State for the Home Department, who, after the death of Mr. Mundella, presided over the protracted deliberations of the Select Committee that inquired into the matter. It will, we understand, follow the main policy sketched out by that tribunal in its report, except in one material respect—raising what is known as the flash-point from 73 to 100 degrees (Abel close test), as the dividing line between petroleum oil and petroleum spirit. That recommendation was carried in the Committee by a bare majority in what a great many people regarded at the time as a snatch division; and the Home Office hold, now, as then, that a far more effectual remedy for the evils complained of can be found in another direction. The Ministerial scheme, in fact, will grapple boldly with the subjects of dangerous lamps, the storage, and handling of oil, the wholesale and retail conditions of the trade, and other interdependent points. The vastness of the question from a social standpoint may be understood when it is stated that no fewer than eleven millions of lamps are estimated to be burning every night in the households of the United Kingdom. Thirty years back petroleum was the luxury of the rich, only five millions of gallons being imported annually. At that time the working-classes had to be content with the tallow candle. American competition, however, has rendered the oil essentially the poor man's light, the imports now reaching this stupendous quantity of nearly 200 millions of gallons.

Naturally, the subject divides itself into two heads—the sufficiency of the present law, and the precautions needed for the prevention of lamp accidents.

On the first branch, the public are brought face to face with the fact that the existing law applies only to petroleum spirit—that is to say, petroleum with a flash point of 73 degrees and under. Petroleum oil—in other words, petroleum with a flash point of over 73 degrees—is absolutely independent of statutory control, notwithstanding that it constitutes the great bulk of the quantity used by the British public. On paper it would appear the easiest thing in the world to raise the flash point to 100 degrees, but doing so, it is urged, would entirely revolutionise an important branch of the trade by thrusting three-fourths of the present imports out of the market. Practically, the whole of Europe has agreed in fixing the flash point below 100 degrees. The English standard was embodied in the Act of 1868 at the suggestion of Sir Frederick Abel, and was deliberately perpetuated by the legislation of 1871, 1879, and 1881. At the outset, dependence had to be placed upon the views of experts, but facts and experience nowadays supply a basis for

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action. The Government have arrived at the conclusion that public safety demands legislation for regulating the storage and transport of petroleum oil, together with a comprehensive amendment of the law regarding petroleum spirit. The forthcoming bill, therefore, will contain the following provisions:

Control over petroleum generally, and admixtures of the same, certain heavy oils excepted.

The flash point of 73deg. to remain as the dividing line between oil and spirit.

A system of licensing to be established for the storage of spirit in all cases, and of oil in cases where it cannot be conveniently kept under registration.

Licensed and registered premises must be at a safe and suitable distance from dwelling-houses, churches or schools, and the quantity of petroleum stored must be limited.

Regulations for conveying and hawking both oil and spirit, for marking the vessels containing the liquids, and for keeping and using the article as a motive power.

Adequate supervision and administration by local authorities.

Establishment of a system of testing.

Turning to the second head—the precautions against lamp accidents—it should be explained that the present legal flash point has no reference whatever to petroleum as an illuminant. Petroleum of any flash point can be used for lighting purposes. The object of adopting a flash point at all by Act of Parliament, was to fix a dividing line below which petroleum, on account of its high volatility, should be subject to control in storage and handling, but above which no legislative precautions were considered necessary. When, therefore, people talk of “raising the flash point” of petroleum as an illuminant, they speak of what does not exist: and the question arises whether surrounding the “poor man’s light” with irritating restrictions, which are practically unknown in other countries, would reduce the number of lamp accidents. Authorities at the Home Office are of opinion that such an experiment would be altogether unjustifiable. They hold

that lamps constructed reasonably well, and used by householders with a fair amount of care, are safe with all ordinary oils. By the promised bill, therefore, the Secretary of State will be empowered to issue an Order, which may be varied whenever necessary, imposing the following regulations upon the manufacture of petroleum lamps in this country:

The use of very fragile glass reservoirs will be prohibited, and all reservoirs must in strength and weight bear a certain relation to their oil capacity—say, one pound of glass to pint of oil.

The base of a table lamp must be larger in diameter than the reservoir, and the weight of the base must be in proportion to the height of the lamp.

All wick-tubes and burners must conform to a standard gauge.

Wick-tubes must be solidly made and well soldered to the burner, and the burner be attached firmly to the reservoir by a screw collar.

These requirements, which will not in any way affect our export trade, are understood to command the approval of the manufacturers; and it is hoped that if they are rigidly enforced by the proper authorities the public will hear very little more about fatal lamp accidents.”

THE LEEDS STIPENDIARY MAGISTRATE ON MILK ADULTERATION.

Important Judgment.

At the Leeds City Police Court, on May 16th, Mr. C. W. Atkinson gave judgment in a case heard by him some time ago in which Abraham Tomlinson, of 8, Belmont-street, Burmantofts, Leeds, was summoned under the Food and Drugs Acts for selling milk which had been certified by the City Analyst (Mr. Fairley) to contain 10 per cent. of added water. Mr. Hart, from the Town Clerk’s office, appeared to prosecute.

In the course of a long judgment his Worship said that the prosecution was instituted under the Food and Drugs Act, 1895. Although the special circumstances of the case disclosed nothing unusual or remarkable, it was one of a type of frequent occurrence, and it seemed to him to be of great importance that there should be a clear understanding as to the precise legal responsibilities attached to vendors in the defendant’s position, and in particular as to the nature of the evidence necessary to support this class of charge. The prosecution had relied simply upon proof of the sale of the article impugned, coupled with the certificate of the public analyst that such article was adulterated, to the extent charged in the information; and Mr. Hart had contended that in the absence of any requirements that the analyst should attend as a witness the certificate was inclusive, and binding upon the Court. That contention was effectually disposed of in his opinion by the decision of the Queen’s Bench Division in 196 in the case of *Hewitt v. Taylor*.

The Courts had, moreover, since that decision been at pains to place it beyond the pale of doubt that the matter was one for the Court to decide, and not for the analyst alone. What was the fact upon which the analyst based the conclusions at which he had arrived in this case? It was that the sample of milk submitted to him contained only 7.62 per cent. of non-fatty solids, whereas, he said, genuine milk contained at least 8.5 per cent. If that were so it was, of course, evident as a matter of elementary arithmetic that the sample contained approximately 10 per

cent. of added water. The question, therefore, that arose was this: Was it to be taken as a proved scientific fact that genuine milk contained at least 8·5 per cent. of non-fatty solids? He thought the answer to that question was emphatically in the negative, and the other constituent elements of pure milk were present in genuine milk, though the proportions varied greatly in different samples, according to the food of the cows that produced it, the mode of milking, and divers other conditions that he need not enumerate.

Mr. Fairley, the analyst, had deposed that he and a number of other analysts had agreed that 8·5 per cent. should be adopted as the percentage of non-fatty solids present in the lowest quality of genuine milk, but he (the Stipendiary Magistrate) found that not long ago in Manchester milk containing a higher per centage of non-fatty solids, to be exact, containing 8·6 per cent. was alleged to be adulterated with water. For the purpose of supporting that prosecution a number of scientific witnesses deposed that in genuine milk the non-fatty solids never fell below 9 per cent., the limit actually adopted by the Society of Public Analysts. On the other hand the detailed results of investigations conducted at Somerset House had been furnished by the Local Government Board to the local authorities, from which it appeared, as Mr. Fairley admitted in the witness-box, that samples of genuine, unadulterated milk contained a less percentage of non-fatty solids than was contained in the sample which was the subject of the present charge, certain samples actually failing as low as 7·52 per cent. It was admitted that the total fatty solids in the sample in question was 10·69 per cent., and the Select Parliamentary Committee had reported that "10 per cent. of milk solids may be more difficult to obtain in certain unfavourable conditions than 12 or 14 per cent. under a more generous diet, a warm atmosphere, and a comfortable lodging. Allowance should therefore be made for these natural variations, which purely scientific chemists had overlooked under these circumstances."

He need scarcely observe that if the analyses he had referred to as being part of the Somerset House investigations had been proved before him, he could not have found it to be established that the sample in question had necessarily contained added water, but he must hold that the sample contained some added water, although the resources of science were not adequate to the extent of defining the exact quantity, which was admittedly a matter of some speculation. The courts had recently decided that even where there was no conflict of scientific testimony, the magistrate may disregard the analyst's certificate on the strength of information derived from his own reading and experience. It seemed to him that that doctrine might prove very dangerous in its application, and not being himself a chemist, he preferred to act simply on the sworn evidence before him. *Ne suter ultra crepidam.*

He was satisfied that no water had been added to the milk with the knowledge or connivance of the defendant, and he should therefore impose a penalty of 5s. upon him. It had been said that the percentage of 8·5 had been adopted as the standard for non-fatty solids, but it could not, he thought, be too clearly emphasised that the law did not recognise any uniform standard for milk. If such standards did exist great injustice must result under the law as it stood. If 8·5 be adopted as the standard a vendor whose milk contained more than that per centage might add water with impunity, whilst if the percentage fell to 8 per cent., which was possible without any water being added, he would be liable to a heavy penalty, although innocent of offence against the statute law.

He was not aware of any authority which established that unwatered milk of however low a quality was to be deemed to be adulterated. It might be very desirable to effect some amendment of the law in this respect, and if Leeds and the other local authorities had made a real effort to secure an amendment the country might possibly see the result in the Government bill that had just emerged

from the Committee of the House of Commons. It seemed sometimes to be overlooked that such amendments must be effected by the Legislature, and could not certainly be effected by incapacity and perversity on the part of the tribunal who had the misfortune to have to administer the imperfect Acts relating to these subjects.

SWANSEA MILK-VENDOR SUES FOR DAMAGES.

At the Swansea County Court, on May 16, the action *Gunning v. Lewis* came on for hearing. Plaintiff, Mrs. Elizabeth Gunning, 151, High-street, Swansea, a milk vendor, trading as the Express Dairy Co., sued Mr. D. Lewis, Ernon Down, Langharne, St. Clear's, for breach of contract. It was alleged that Mr. Lewis agreed with Mrs. Gunning to deliver to her from twenty to twenty-five gallons per day of pure unskimmed milk. For loss of profit—it being alleged that the quality or the quantity of the milk was not delivered—£3 11s. was claimed, and damages to the amount of £67 5s. 3d. were claimed "through loss of custom in consequence of defendant supplying milk not of the quality contracted for." The amount of claim abandoned for £20 16s. 3d., leaving the damages now claimed at £50. Mr. C. H. Glascodine (instructed by Mr. Ivor Evans) appeared for the plaintiff, and Mr. Villiers Meager defended.—Mr. W. F. Gunning said he managed, for his wife, the Empress Dairy. Under a contract with Mr. Lewis he was to receive a certain quantity of pure unskimmed milk daily, and in the space of about two months he received over 500 gallons short. A great many of the customers left off dealing with him during the time he was receiving milk from the defendant, complaining of the inferior quality of the milk.—Under cross-examination witness stated that, to make up for the quantity sent on from Langharne, he had to contract with a Cardiff firm to send on milk. The complaints he had spoken of were made as a rule against the milk he received from the defendant. He was continually inspecting the milk, and it was only a little "above par." The standard in Swansea was particularly low, but it was of no use taking milk out which was only a few degrees better than was allowed by the Sanitary Authority.—Re-Examined: There had been no complaints made about the milk received through other sources.—Mr. Lambert, inspector under the Food and Drugs Act, deposed to taking a sample of the milk, and having it analysed. On the 7th of March, Mr. Lewis was fined £3 and costs for selling milk which was found to contain 10 per cent. of added water.—Cross-examined: At Mr. A. Gunning's request he went with him to the station and obtained a sample from one of the churns which had just come in by train. He had taken samples of milk from other consignors before but not from Mr. Lewis.—Mrs. Davies, of the Olive Branch, High-street, said she had given up taking Mr. Gunning's milk on account of its inferior quality. Mrs. Walters, of 11, Stanley-terrace, Mr. Roberts, 8, High-street, Mr. James, 95, St. Helen's-road, Mr. Musty, Portland-street, Mrs. Davies, Matthew-street, Mr. Newing, Cockett, Mr. Parkhouse, St. Thomas, and Mr. John Parker, Hafod, also gave evidence as to the inferiority of the milk.—Mr. W. Leaker, St. Helen's-road, gave evidence as to the value of a milk round, and Mrs. Baldson, the local agent of the Cardiff firm, who supplied Mr. Gunning with milk, deposed that he paid for the supply at 9d. per gallon.—This was the case for the plaintiff. For the defence Mr. Lewis was called, and stated that Mr. Gunning never complained to him about the quantity of milk sent. Once he complained of the quality of milk, upon which he wrote requesting that it be returned. He never added anything to the milk himself.—His Honour found that Gunning undoubtedly did lose many of his customers through the inferiority of the milk, and that it was a very serious loss to him. He gave judgment for £28 6s. 11d., with costs,

MILK ADULTERATION.

At Portsmouth, on May 19, David Gilbert, dairyman, of 19, Clarence-street, Landport, pleaded not guilty to an information for selling milk on the 19th ult. from which 1·5 per cent. of cream had been abstracted.—James Hobbs, Inspector under the Food and Drugs Act, proved the case, and the defendant, who said that he bought the milk as pure new milk and had sold it as such, but had no warranty, was fined 5s. towards the costs, it being a first offence.

In the Aberdeen Sheriff Court, on May 26, before Sheriff Robertson, James Mackie, milkseller, 65, College-street, was charged at the instance of Mr. Kenneth Cameron, sanitary inspector, with having, on March 21, sold threepence worth of sweet milk which was deficient in fat to the extent of 27 per cent. Accused pleaded not guilty, and was defended by Mr. D. Macgregor Mitchell, solicitor.

James Forbes, assistant sanitary inspector, stated that he, on the day in question, had purchased the milk in accused's shop, stating that it was for analysis. The milk was divided into three parts, sealed up, and part sent to the city analyst.

Alexander Low, assistant sanitary inspector, corroborated.

Mr. Thomas Jamieson, city analyst, stated that he had analysed the milk, with the following result:—Water, 88·59 per cent.; fat, 2·01; non-fatty solids, 9·30—showing a deficiency below the standard of 2·75 per cent. recognised by chemists all over the country. No natural milk could contain less fatty substances.

By the Sheriff.—Witness did not find at this season of the year that milk was materially thinner. The milk of some cows was richer than that of others.

By the Fiscal.—Witness had a good deal of experience in analysing milk. It was clearly his opinion that this could not be natural milk.

By Mr. Mitchell.—His opinion was based upon the analysis of a very large number of samples, and on his knowledge of what chemists all over the Kingdom had done.

By the Sheriff.—The Aylesbury Dairy Company analysed 120,000 milks from cows fed by themselves, and the average percentage was 4 over a large herd of cows. The Somerset House chemists analysed the milk of a large number of cows, and got an average percentage of 3·98.

By the Sheriff.—Witness stated the time of the year did not materially affect milk, and if the cow was of any ordinary breed the percentage did not descend below 2·75. The sample appeared to consist of the previous evening's milk skimmed and mixed with the morning's milk.

Dr. Matthew Hay had had a good deal of experience in the analysis of milk. He had never found the percentage of fat to fall below 3 or something above 3.

By the Sheriff.—Witness had analysed hundreds of samples.

In answer to Mr. Lamb, Procurator-Fiscal, witness said his experience was that the general average was a little over 4 per cent. The result of the analysis of chemists generally was that the percentage of fat was never found to be below 3 in the case of mixed milks from a dairy. Very rarely the average was below 3, and then only in the case of milk of single cows. The Somerset House standard was 2·75 to allow a reasonable margin.

Cross-examined.—The feeding of a cow made a slight difference, but not enough to reduce the percentage below 3, or 2·75 at the very outside.

For the defence, Bella Mackie, the girl who sold the milk, said the milk came from Mr. Anderson, Loirston, Nigg. She was present when it came in in the morning. The milk was sold out of the can. They sold 6 to 7 gallons a day.

Accused, examined, stated that he was a grocer also in a small way.

The Sheriff said there was no question that the only people who could be brought up were the people found selling the milk. It might be this man was not to blame,

but it was impossible that those whose duty it was to see that the public were not defrauded in the matter of food and drugs could protect them except by testing and analysing the article. Something might be said as to possible variations if the matter was one of very small percentage, but in this case it was a very considerable percentage less than what was known to be the universally accepted minimum. Accused would have to pay 30s., or go five days to prison.

COFFEE ADULTERATION.

J. K. JENKINS, manager of the Hebburn Co-operative Society, was summoned at the South Shields Petty Sessions, for selling coffee as pure coffee, which contained 50 per cent. of chicory. Mr. James Laidler, Inspector under the Food and Drugs Act, appeared to prosecute, and Mr. J. O. Davidson defended.

James William Wilson said he was assistant inspector under the Food and Drugs Act, and attended at the defendant's shop on the 14th April last, and asked for $\frac{1}{2}$ lb. of coffee, and the assistant in the shop went to a large revolving canister which was on the counter, and turning it round, extracted some coffee which he put in a packet labelled "coffee" and handed it to witness. He then told the assistant that he had purchased it to send to the Public Analyst. Witness then divided the coffee into three parts, and gave one to the manager, who came into the shop at that moment.

By Mr. Davidson: He had received several samples from the defendant's shop, but they were all satisfactory in their analysis. The certificate as received from the Public Analyst stated that the coffee contained 50 per cent. coffee and 50 per cent. of chicory.

For the defence, Mr. Davidson explained that his client had carried on business for very many years in Hebburn. On the present occasion, when the Inspector called, the assistant had, purely accidentally, served him with the wrong article. The canister containing the coffee contained three compartments. In one was placed pure coffee, in another coffee and chicory, and in the third one third coffee and two thirds chicory. In turning the canister round, he had taken the article from the wrong compartment. It was purely a mistake, and he asked the Bench to treat it as one, and inflict merely a nominal fine.

The Bench said they considered that the affair must have been a mistake, as the adulteration was so stupendous. Defendant would be fined 20s. and costs.

At the Nottingham Shire Hall on May 27th, George P. Jackson, of Eastwood, was charged with selling adulterated coffee on the 37th ult. Mr. Searby, of Ilkeston, appeared for the defendant.

Colonel Story, Chief Inspector for the County under the Food and Drugs Act, stated that the half pound of coffee which he purchased from the defendant's shop at Eastwood was a mixture containing 95 parts of coffee and five parts of chicory.

Cross-examined by Mr. Searby, Colonel Story said if the paper in which the mixture was enclosed had stated that it was a mixture of chicory and coffee it would not have been analysed. He called it a very bad case of adulteration, particularly as the defendant was a tradesman on a large scale.

For the defence Mr. Searby submitted that an assistant put the grounded coffee in the chicory department of the receptacle in mistake, and this accounted for the accident which had occurred.

Defendant was fined 40s., the Chairman remarking that the defendant was responsible for what his employees did.

EXCESS WATER IN BUTTER.

At Tiverton, George Venner, of Victoria-terrace, Taunton, was summoned under the Food and Drugs Act,

charged with selling butter in the Tiverton market, on 18th April last, to the prejudice of the purchaser, being adulterated with 10 per cent. of water. The case had been adjourned to allow defendant to have a sample of the butter analysed at Somerset House. The Somerset House analysis stated that the butter contained 32·8 per cent. of water, and they were of opinion that the percentage of water was excessive. The Tiverton borough analyst, at the adjournment, stated that the butter contained 30 per cent. of water. Mr. C. P. Clarke (of Taunton), who appeared for the defendant, said the alleged adulteration contained no obnoxious substance. There might have been a slight amount of carelessness in making up the butter. No complaint had ever been made against the defendant, and there was no evidence of fraudulent intent to increase the bulk of the butter. The Bench said they considered the large percentage of water could have been avoided, and they considered defendant fraudulently added water to increase the weight of the butter. He would be fined £5 and costs. The Chairman of the Bench (Mr. E. M. Winton) said it was very gratifying to them that the borough analyst was so thoroughly supported in his report by the Somerset House authorities. The Bench granted Mr. Clarke the stay of any distress for a week, so that he might consider what further steps he will take in the matter.

WATER AT SPIRIT PRICE.

At Guildford Borough Bench, on May 24th, Henry Layton Lomax, North-street, was summoned for having sold half a pint of gin which was not of the nature, substance and quality of the article demanded by the purchaser, on April 27th.—There was a similar summons in respect of a half-pint of whiskey.—Mr. J. Kenyon Goldthorpe appeared for the defence.—Edward Worlock, son of the head constable, said on the day in question he went to the Little White Lion, public house, and purchased half a pint of gin for 1s., and half a pint of whiskey for 1s. 4d. He then called in Sergt. Chapman, who took charge of the bottles containing the spirit.—Cross-examined: He did not leave the premises for the purpose of calling the sergeant; he merely put his head out of the door and called him.—P. S. Chapman said when the last witness called him into the house, he said the landlady had served him with the spirits. Witness informed Mrs. Lomas that the spirits had been purchased in order that they might be submitted to the public analyst. She made no reply. He divided the spirits in her presence in three equal parts.—The landlady, interrupting, remarked that she said, "Very well."—Head-constable Worlock said that he handed samples of the spirits to Mr. Angel, public analyst, at Southampton. He produced the analyst's certificates, which showed that the gin was 38·18 degrees under proof, and the whiskey 33·32 under proof, the dilution in each case being excessive.—Mr. Goldthorpe said he had to urge two reasons why the summons should be dismissed. He might point out first in respect to the dilution at any rate of the gin it was not of a considerable extent. At the time these purchases were made his client was ill in bed, suffering from severe fractures, and the whole conduct of his business devolved upon his wife. For some time past he had been in the habit of purchasing his spirits a certain degree under proof, and he himself had diluted them to the proper strength at which to supply them to the public. Latterly, he had not done so, but had bought spirits already diluted and ready to supply to the public. His wife did not know this, and during her husband's illness diluted the spirits not knowing they were already in a condition to be supplied to the public. If that had not been done the dilution would not have been too great. Then there was in the bar a plain notice which stated that "all spirits sold at this establishment are diluted according to price."—The defendant, who said he had been landlord of the house since September last, bore out the statement

of his solicitor, and said the notice in question was placed near the clock, and could be seen by anyone entering the bar.—Mrs. Lomax corroborated, and in cross-examination said the spirits were diluted by accident, and that she did not call the attention of the boy or the sergeant to the notice.—George Dawkins, said he had frequently seen the notice in the bar.—The witnesses for the prosecution recalled said they did not see the notice.—The Bench considered that there had been an excess of adulteration, and fined defendant £1 in each case.—Mr. Goldthorpe: I give notice to appeal.

WILLIAM MORDECAI of the Ship Aground, Porthcawl, was fined £3, including costs, at Bridgend on May 27th, for selling whisky 36½ per cent. under proof, the percentage allowed being 25 per cent.

MARGARINE AT BUTTER PRICE.

BEFORE Sheriff Robertson, in Aberdeen Sheriff Court on May 26th, a grocer in the city was charged at the instance of Mr. Kenneth Cameron, sanitary inspector under the Sale of Food and Drugs Acts, with having, on 20th April, by the hands of a servant, sold 1 lb. of salt butter which was not of the nature, substance, and quality demanded by the purchaser, in respect that it contained fat foreign to salt butter to an extent of not less than 90 per cent. He pleaded guilty, and Mr. Horace Fildes, solicitor, made a statement on his behalf. He stated that the grocer was out of the shop at the time the butter was sold, and the boy, who had only been three months at the counter, made a slip. His client would take very great care that a similar mistake was not made again. Mr. Robert Lamb, city procurator fiscal, who conducted the prosecution, stated that in the analyst's certificate it was shown that there was 90 per cent. of foreign fat, and that his information was that the boy had been, if not at the counter, at least in the grocer's employment for 15 months. Sheriff Robertson said he could not regard this otherwise than as a somewhat serious case, for not only was the stuff sold not what it was expected to be, but, besides, it should have been labelled as margarine. Therefore, there were really two contraventions. It would be much easier to say that it was a slip if there had been no necessity of labelling it. A fine of £4, with the option of 15 days' imprisonment, was imposed.

At the Worship-street Police Court, London, on May 25th, Annie Jones, a young, unmarried woman, answered a summons for selling to the prejudice of the purchaser an article called "butter," which was 88 per cent. of other kinds of fat.—The purchase was proved by a sanitary officer of Bethnal Green Parish, the defendant serving in the shop, 200, Three Colt-lane.—Mr. Foote, chief sanitary officer of the parish, said that those premises had become well known from many similar prosecutions there, though the name on other occasions had been that of Owen Brothers. A practice had sprung up, however, of putting up a bogus owner in order to avoid proof of previous convictions, and that, he said, was so in this instance, the shop still being carried on by "Owen Brothers"—Mr. Cleur had no doubt it was so, and decided to impose the full penalty. He said he did not know why Welshmen had taken to the dairy business to defraud and poison Londoners, but it was so, and he was ashamed of his own countrymen. A fine of £20 and five guineas costs was imposed.

MILK ADULTERATION.

A Magistrate on the Defensive.

At the quarterly meeting of the Blandford T.C., the Mayor called attention to a decision the ex-Mayor and himself gave in a recent case of milk adulteration. The decision had been reflected upon in the report of the Chief Constable of the county, and it was said that a 5s. fine was not sufficient deterrent to offenders of that description,

In trying the case the ex-Mayor found that the milk had only been in the possession of the man for a few minutes before he resold it. The defendant had to pay the cost of the analysis, of the proceedings, and of the solicitor who defended him. As it was a first offence and the man was not in good circumstances, the ex-Mayor and himself came to the conclusion that the fine fully met the case. In that particular case they were bound to inflict the penalty, because Stone's "Justice's Manual" laid it down very clearly that they had to go by the result of the analysis, and a person who re-sold milk must take care to protect himself. He thought the ex-Mayor and himself might have been communicated with before that reflection was made. He had since seen a member of the Council, who had told him that the matter did not come from the Chief Constable, but from a member of the Committee who called attention to it. He (the Mayor) was of opinion that gentlemen sitting at the Court were better able to determine on the matter than those who were outside and knew nothing about it.

CANNED FOODS: THE SIGNIFICANCE OF THE SOLDERING POINTS.

A Suggestion.

In an interesting communication to the *Lancet* of May 13th, Dr. F. W. Alexander, Medical Officer of Health for Bow, gives some information anent the canned goods trade which our many subscribers who are concerned in suppressing the sale of unsound tinned food will find useful.

Dr. Alexander says, "Articles of food which are to be canned as a rule are par-boiled to allow for a certain amount of swelling before being put into the can, and as further cooking, with sterilising, is done whilst in the can it is essential for the soldering to be done strongly, and when fixing on the top of a can in order to seal it down it is necessary to have a hole in this piece of metal forming the top to allow of the escape of the expanded air and the steam generated by the soldering process, otherwise the solder will spit and will not flow properly to form a good and neat joint. When the top has been soldered on and the prick-hole shut with solder the can is placed in a water bath or a steaming apparatus. The temperature being raised the contents expand and cause the cans to 'blow,' which means that the ends of the can become convex. The can is then taken out of the apparatus and the prick-hole is unsoldered by the application of a hot iron, when about one cubic inch of heated air escapes. The hole is soldered up afresh and the can put back again into the water-bath or steaming apparatus and the sterilising and cooking processes completed. In evidence it was pointed out that for blowing purposes during the bathing and steaming processes, instead of unsoldering the prick-hole, some firms prefer making a second hole either at the side or at the other end of the can. The reason one understands for this is that when cans are hot and their prick-holes have been unsoldered and the contents are steaming out the holes cannot be soldered up again so neatly, hence the blow-hole is made at the other end, which is made the bottom of the can when labelled, or the hole is made on the side and is covered afterwards by the label.

"In unsoldering or making a second hole to relieve pressure in order to create a vacuum, it may be necessary on account of the contents of a can having shifted and blocking up such a hole, and thereby preventing the air escaping, to make another hole with a 'prod,' which may account for more than one soldering point. With some canned foods it will be noticed that inside the can immediately under the soldering point is a small metallic plate, the object of which is to obviate the necessity of making another hole as this plate prevents the contents of the can blocking up the soldering point which when unsoldered allows the can to blow so as to obtain a vacuum. In the steaming apparatus on shelves certain foods are cooked in

the cans with the blow-hole unsoldered, but when the water-bath is used the cans are packed together and they are completely soldered down. It was pointed out in evidence by an expert that the blow-hole is not really necessary, but firms do this in the first or low-heat stages of the bathing or steaming processes to allow air to escape so that when the cooking and sterilising are completed and the cans have cooled down the ends of the can become concave. This is done to satisfy the public who like to see concave ends when purchasing.

"It is well known that dishonest canned-food dealers prick or unsolder cans which are 'blown' or 'springy' so as to allow of the escape of the gases produced by putrefaction which by pressure are causing the ends to become convex instead of concave and one is afraid that the steam blast is also used which may have the effect of stopping putrefactive changes for a time but the ptomaines would remain. A tinned can which has been bathed or steamed loses its lustre and is lacquered over where it will not be covered with a label for the purpose of improving its appearance or preserving it from decay.

"In the cans (they were all flat ones) of putrid lobster which came into my hands there was not only the prick-hole upon the top but under the label there were two or three pricks and another one in the side immediately opposite these. The tins had been relabelled, portions of the old label being distinctly seen. The defence stated that the re-labelling was due to the cans coming from America and the old label being taken off. It would be interesting to know whether such is the universal practice. The explanation of four holes upon the side was not at all satisfactory. With condensed milk and, I believe, with jams and syrups, it is not absolutely necessary to have 'soldering' and 'blow-holes.' In some well-known brands neither 'soldering' nor 'blow-hole' is to be found. It would appear that the reason for this is that milk, and also jams and syrups, are already cooked and are poured hot into the can through a small aperture called the 'stud-hole' and form a body in the tin leaving scarcely any air space and the can being hot the small stud is quickly and lightly soldered down and in many instances by the help of machinery. The soldering is lightly done because such cans have not to undergo pressure by any further cooking of their contents. The sugar is a preservative in itself. When the cans become cold they will as a matter of fact have concave ends. The stud end of a can is generally made the bottom and the metal of the top end is fluted or beaded on the surface to strengthen it. For the defence it was stated that a blown can of condensed milk after being pricked could not be resoldered, but several blown cans were produced which had been recently pricked and resoldered exceedingly cleverly by experts engaged by the prosecution.

"The question of how long foods hermetically sealed will keep was raised during the hearing of the summonses and whether the heat of a shop would not affect the contents of a can. Dr. Brown M.O.H., Bacup, states: 'Fortunately, having had canned foods, including meats, soups, rabbits, oysters, &c., of from 20 to 30 years old, I found that the tins, though rusty outside, were perfectly good inside; none were blown.' One of the experts for the prosecution told me that his firm had now canned meat quite good which had been through the Crimean War. An expert stated in evidence that one plan adopted by his firm to test whether the sterilising process had been properly carried out and whether the contents of cans were good before sending them out was to place them in a heated room or chamber in order to see if the cans became blown.

"The suggestion one would like to make is that no can should have more than one 'soldering point' and that that 'point' should be either at the top or at the bottom of the can and should never be in such a position as to be liable to be covered by any label, and before leaving the factory a metallic plate with the name of the firm and the date of sending out should be soldered over the 'soldering point.' With cans which are filled through

stud-holes and whether there be a 'soldering point' or not the whole stud and soldering should be covered over with a plate as above. Imported canned foods should have the names of the importers printed legibly on the label and such persons should be made answerable for the above requirements. I quite agree with Dr. Brown that 'terne-plated' cans should be forbidden for all goods, but especially for fruits. He suggests a non-metallic coating for cans. By 'terne-plated' is meant an alloy of lead and tin by which iron cans are plated.

"I must apologise for so lengthened a communication, but I thought that there might be some useful information to afford, as canned foods are indeed 'cans of mysteries,' and without opening cans those having the care of the public health cannot pass an opinion respecting the contents as cans which have been 'blown' are 'doctored up.'"

EMBALMED BEEF

By W. T. Parker.

Writing in the *Dietetic and Hygienic Gazette*, Mr. W. T. Parker says of the recent tinned meat scandals in the American Army, "The reports which have attracted my attention especially, are those relating to the statements of a noted packing company of Chicago. These declared that 'no complaints have ever been received from the countless persons who have purchased their canned beef and that the meat furnished the soldiers was precisely the same as that contained in the cans sold in the groceries."

"It is certainly to be hoped that it was no worse, but it is possible that some old lots were sent on to feed the soldiers and that no special care in favour of the soldiers was taken in filling out the contract. If we are to accept the theory that it was just as good as that at the average grocery-store then we know what to estimate the food-value of such canned stuff.

"We have several times, summer and winter, purchased the same brand for use under extraordinary needs and we have always found it very disagreeable to the taste, unwholesome and absolutely dangerous to health if eaten in any quantity at all equal to fresh meat. Its odour under the best conditions is sickening to many people and as a food for invalids is totally unfit, valueless as a nutrient and dangerous as unwholesome. I have frequently warned patients against using it, and have more than once traced illness to its use. Undoubtedly among our poorer classes and for those who are obliged through the necessity of travel to eat some of it, considerable quantities are consumed and decided illness in many cases must result. The American is supposed to have a strong stomach, and the amount of doughy bread, indigestible girdle-cakes, poor pork, injurious cake, and adulterated tea, coffee, milk—indeed, everything edible, which the Americans consume is simply marvellous. The Americans are as a nation dyspeptic and when as physicians we are permitted to enter their homes and witness what they eat themselves and force their hungry children to devour, that they are a race of dyspeptics is not to be wondered at. I have heard Americans in clean, wholesome inns in Switzerland ask for 'pie' and sigh for one good, square meal, when to make a healthy man eat at their 'home' tables would be to make him ill.

"The canned-goods nuisance is one of the horrors of American civilization, which time will, it is to be hoped, ultimately abolish. For those whose have passed over our great desert before it became the prosperous, well-settled country it now is, what countless experience of canned horrors such travellers could recall. Of all the poisonous canned goods perhaps corned beef is the least objectionable, but recent experiences have, it is to be hoped, placed a check on the sale of embalmed beef. This will be one of the compensations of the war. To abolish the 'ready' methods of housekeeping (?) which canned goods are supposed to supply will be a national blessing—which will mitigate some of the horrors of war.

WINE FROM BARLEY: WHERE IS IT SOLD?

THE making of "wine" from barley goes on apace abroad. Foreign papers even go so far as to declare that the revolution likely to be caused in wine-growing countries by this discovery will be equal to that caused by the discovery of beet-root sugar.

It seems that a large factory is at work at Wandsbek, near Hamburg, producing the so-called Malten-Weine, which have the characteristics of the wines of Southern Europe, owing to the entirely new process of fermentation, to which they are subjected. The factory is said to produce about a quarter of a million gallons per annum. The discovery was due to Pasteur, who, however, never carried it beyond theoretical point; and it was left to Mr. Hansen, a Dane, and Dr. Sauer, a German bacteriologist, to carry Pasteur's theory into practice.

The barley is malted and carried to the point of fermentation, when lactic acid and vinous ferments are introduced, the mass being subjected to sundry variations of temperature. Sherry, Port, Tokay and Malaga have thus been closely imitated. When fermentation is completed, the liquor is put into huge vats of about 4,500 gallons, and thence into casks of 1,500 gallons, where it is artificially matured by being raised to a high temperature. The transformation of the substances which give the liquor its taste and bouquet is thus accomplished in a few weeks instead of requiring as many years, and, at the same time, all extraneous matter derived from the ferments is sterilized and rendered innocuous. The liquor can then be drawn off into small casks or bottles, and in three or four months it is ready for consumption. These artificial wines have a large percentage of alcohol, 19 per cent., or even more, being derived wholly from fermentation.

It is notorious that alcohol is added to most of the wines we drink, few wines being sufficiently rich in spirit to keep for a long time without such addition. The artificial wine should therefore be, theoretically at least, purer than the natural wine; and, at any rate, wine-growers have no disloyal competition to complain of, while to barley-growers the discovery may be of vast practical utility, as forming a new market for an article which agricultural depression has sorely depreciated. The product is sold as "highly fermented barley wine." The medical reports in Germany on these wines seem to have been very favourable.

In a Hamburg hospital, Tokay, sherry, and port were used in the course of last year. These wines were taken almost without exception very willingly by the sick, and preferred even to Greek and other southern wines. The favourable influence of the malt wine on the general health of the patient, and on an exhausted nervous system and the acceleration of the action of the heart all showed themselves in the same way as is the case with other wines containing a similar amount of alcohol. In cases of disease of the stomach it has been observed that the mild malt wines are easily digested while other sweet wines proved troublesome.

The opinion that only wines made from grapes should be given to invalids is unfounded prejudice. All wines equal in alcohol to the malt wine are so dear that they can only be prescribed for a few patients, and very few other wines contain the degree of nourishment of these malt wines; hence we may greet their preparation as an unexpected triumph of our technical fermentation. The invention is at present only in its infancy, and it may well be that the wine is insipid to the palate of the connoisseur, though it is used by a large number of hospitals and invalids in Germany.

BORIC ACID IN SOAPS.

F. J. R. CARULLA has read a short paper before the Nottingham section of the Society of Chemical Industry, in which he states that boric acid in soap is of great use to destroy alkalinity, but it cannot remain in the free state in the wash water when the soap is put into use, as seems

to be imagined possible. It can have no antiseptic effect, but for the introduction of antiseptics that require freedom from alkali into the soap boric acid is invaluable. A toilet soap is now made under a fancy name in which this principle has proved to be most effective. An addition of 5 per cent. of boric acid makes it difficult for soap to lather. It makes it, however, a very lasting and economical soap; still, that quality can be secured with a much smaller percentage of boric acid, whilst benefitting the soap in other ways by the reduced quantity used. Idiosyncrasy enters into the question of the use of soap as in other things, and some people can use a soap that would be very irritating to others. In regard to a point raised as to the time of contact of the soap solution with the skin, it was urged that this was an argument against antiseptic soaps which possessed no force. The object of using a soap of that kind is to get rid of disease germs and to prevent their transmission from one person to another. With the increasing use of superfatted soaps for toilet purposes, and the fact that disease germs can live and multiply in oils and fats, it is quite likely that much disease is transmitted from one person to another by using the same tablet of soap. That cannot happen with a genuine antiseptic soap. Then, again, disease germs are washed off the skin and carried into the water. There they will remain long in contact with the soap solution, which, if powerful enough, will limit their further power for harm.

MR. BOUSFIELD'S WEIGHT AND MEASURES BILL

CONTAINS thirty-one clauses. "Cased" weights—that is to say, lead or pewter weights cased with brass, copper, or iron, as provided by section 30 of the principal Statute—are to be abolished, and their use made illegal. Compulsory periodical re-verification is another of the points which the promoter of the Bill deems expedient for the protection of the buying public, and he proposes that the Board of Trade shall prescribe regulations for ensuring that all weights and measures and weighing instruments used for trade shall be re-verified not less than once in three years. The Bill would not interfere with weighing instruments used for scientific purposes and not for trade, but it proposes to bring Post Office weights and scales within the scope of the Weights and Measures Acts. The names on the back of the Bill as sponsors are Mr. Kearley, Mr. Parkes (Birmingham Central), and Sir Fortescue Flannery (Shipley).

A BEER TABLOID.

THE latest reported German scientific invention is called a "beer tabloid." The beverage is reduced to a powder, the addition of water to which, by the generation of carbonic acid gas, makes a foaming tankard, as good, it is said, as if freshly drawn from the barrel. If the claims made for the "tabloids" are well founded, a man will be able to carry in his vest pocket the material for a glass of beer. We have already got the champagne tabloid, but we much doubt if either ingenious preparation will hit the public taste.

CORRESPONDENCE.

TO THE EDITOR OF *Food and Sanitation*.

THE SALE OF FOOD AND DRUGS BILL.

SIR,—Those who, like myself, have long believed, and hoped against hope, that brighter days were in store for

English butter producers must feel grievously disappointed at Mr. Walter Long's failure to remove, by means of a judiciously amended Sale of Food and Drugs Bill, the handicap which at presents tells so unfairly against English, and in favour of foreign butter producers.

Your readers will perhaps be surprised to learn that, excluding a few private contracts with clubs, hotels, etc., English butter has absolutely vanished from the London market; is not so much as known in the wholesale trade. Not a pound of "Dorset butter," for instance, comes nowadays to the London market from Dorsetshire. Consumers in our large towns are entirely supplied by Danish, French, Dutch, Russian, German, Italian, Finnish, Argentine, American, Canadian, and Australian butter, who are allowed to mark or stamp this imported product with English names, "Dorset," "Aylesbury," etc. While the production of English, Scottish, and Irish butter (about 85,000 tons annually) has remained stationary since 1888, imports of the article from abroad have risen during the same period, from 82,000 to 141,500 tons per annum. I maintain, sir, on behalf of the English farmers, that the Merchandise Marks Act (which could easily be enforced, seeing that high priced butter is usually retailed bearing a stamp of some kind) is habitually defied and evaded by the majority of London butter merchants. Why should customers be induced to buy, say, Russian butter, believing that they are buying the product of English farms? I fear that during the discussion of the Sale of the Food and Drugs Bill in Grand Committee, earnest and convinced protectionists like Mr. Kearley and Mr. Lambert allowed themselves to be made the tools of a clever ring of foreign butter importers, anxious, for well known reasons, to strike a blow at the margarine trade.

Now, sir, margarine and margarine mixtures, as it happens, do not compete with English butter at all. They do compete (as Mr. John Burns shrewdly reminded the Grand Committee on Trade) with dripping. Margarine has killed demand among the poorer class of consumers for dripping, much to the chargin of the British cook whose "perquisite" it is. Margarine competes with the kind of butter which English farmers never ought to make, that is to say, with the worst possible kind of "butter," and it happens that the astute foreigner is quite willing to supply the British consumer with the latter. According to the evidence of Mr. R. H. Slater (Mr. Kearley's nephew, Blue Book No. 363, French exporters at Rennes send to London "butter" habitually adulterated. Naturally, therefore, we see agents of the Danish Government as well as foreign butter importers, lobbying at Westminster for Mr. Long's Sale of Food and Drugs Bill, 1899, which does nothing whatever for English butter producers, but does privilege the sale of margarine (much of it manufactured in the United Kingdom) in order, apparently, that the very poorest class of consumers in our large town may henceforth be compelled to buy refuse French and Italian butter at enhanced prices. It was recently laid down by a magistrate in the provinces that he had no power to check the sale of anything called "butter," no matter how rancid and unwholesome it might be. The Sale of Food and Drugs Bill, 1899, renders a grocer liable to three month's imprisonment if he sells a mixture distinctly labelled "margarine," which happens to contain more than ten per cent. of butter! How that helps the English farmer I fail to see; indeed, some of my farmer friends tell me that the margarine factories springing up in their neighbourhood make a good market for their milk and for the fat of their horned cattle, which hitherto they have sold at "tallow prices." Be that as it may, Mr. Long might have given the English farmer bread, in the shape of a Bill compelling foreign importers to stamp foreign butter with its real place of origin; instead, he has given us a stone, in the shape of another anti-margarine Bill, to "protect" producers of—dripping.—I am, Sir, Your obedient servant,

DASHER.

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Food and Sanitation.

SATURDAY, JUNE 10, 1899.

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MORE UNSOUND CONDENSED MILK.

A DISCUSSION at the Limehouse Board of Works on May 31st, illustrates how large is the traffic in unsound condensed milk and how beset with difficulties are the authorities when they discover the putrid stuff. Dr. Thomas, the Medical Officer of Health, reported that between 40 and

50 tons of unsound condensed milk were deposited at Vane's Wharf, Narrow-street, and it was resolved that the matter be left in the hands of the Medical Officer to take such proceedings as he may consider necessary.—Mr. Deer asked who it was proposed to take proceedings against.—The Medical Officer said he expected it would be against the owners.—Mr. Deer: Have you got the names of the owners?—The Medical Officer: Oh, yes.—Mr. Deer: Who are they?—The Medical Officer: Several people in the City; but I don't think it advisable at this step to give them.—Mr. Dixon: Is there any need to shield anybody?—The Medical Officer: Not in the least.—Mr. Hartnoll: Have you touched the stuff?—The Medical Officer: Not at present. If the Clerk says I can give the names I am ready to do so.—Mr. Dixon said he understood some of this stuff had been sold, and it was only by a lucky chance that they had nipped it in the bud and prevented the whole of it being allowed to go out to poison the neighbourhood. Was this another rotten eggs case?—The Medical Officer, in reply to a question, said the owner told him the stuff was imported as unsound, and unfit for human food. The only reason he did not seize it was, he was acting on the clerk's advice.—Mr. Knight: But if as you say it was unsound, why didn't you seize it?—The Medical Officer: Because it was said to be intended for pigs' food.—Mr. Knight: Did I not show you that it was marked for pigs' food?—Mr. Sayers: That is only a blind.—Mr. Knight: I call on you as a gentleman to withdraw that. When we have landing notes, we don't know what the boxes will contain. We get thousands of cases landed from steamers every year, but we don't know what the quality of the contents may be.—The Medical Officer denied that he had broken his contract.—Mr. Knight contended that he had helped the Board all he could, and he felt that it was most unjust for any member to cast suspicion upon him by declaring that there was any 'blind' about it.—The Chairman said the position was this: if the stuff was proved to be intended for pigs' food, and the doctor destroyed it, the Board would be responsible, but he had to get evidence that it was intended for the food of man before any proceedings could be taken.—Mr. Knight said every case was marked "not for human food."—The Medical Officer said it was the same in the case of Fell's. There every case was marked "not for human food."—Mr. Brennan considered the remark that it was a blind to so mark the cases ought to be withdrawn.—Mr. Sayers: I withdraw it.—Mr. George: If this stuff is poisonous to human beings, would it not be bad for pigs? How would it affect them.—Mr. Hartnoll: Why, they'd have tuberculosis.—The Medical Officer said he did not think it was intended for pigs' food. When the milk decomposed, the acid given off would dissolve the solder, and would therefore poison pigs, consequently it was as unfit for pigs as it was for human beings.—Mr. George: It would poison the pigs?—The Medical Officer: You are quite right.—Mr. Hartnoll: Nice for making polonies. (Laughter.)—The recommendation of the Committee was adopted.

It is a great pity that the confectioners who buy this

putrid stuff cannot be hauled before the Courts but the trickery with which the rotten condensed milk is disposed of renders it very unlikely that the worst offenders can be reached. The manufacturers may have some reason for saying that it is good enough for pig feeding because it is astounding what a pig will thrive on, and no doubt some of the milk is good enough for pigs use, but there is equally no doubt that more of it is used for human food.

MARGARINE AS BUTTER.

AARON BEMBRIDGE, of 137, Price-street, Smethwick, was summoned under the Food and Drugs Act, on May 24th, for selling butter not of the nature and quality demanded by the purchaser. Mr. R. A. Willcock (of Wolverhampton) prosecuted on behalf of the County Authority, and Mr. A. J. Glover defended.—Mr. Willcock explained that on March 16th, an assistant of the Food and Drugs Act Inspector purchased from the defendant's shop half a pound of what was supposed to be butter. It was handed over to the Inspector, Mr. Van Tromp, and upon analysis was found to be margarine containing only 22 per cent of real butter. There was another case, arising out of that one, against the wholesale dealers.—Evidence having been given in support of this statement, Mr. Glover pleaded that the defendant had from time to time purchased butter from Feeley & Co., of Birmingham. He had never bought or sold margarine, but always that which he believed to be butter. He purchased the article in question from Feeley & Co., as Dorset butter, and paid 10d. per pound for it, but on analysis it proved to be margarine. Defendant subsequently made another deal with the firm named, and further proceedings arose out of it he asked for that case to be taken before the Bench adjudicated in the case of his client.—Mr. Willcock said defendant was now in a very unfortunate position of having sold that margarine as butter, but they would endeavour to put the blame upon the right shoulders, and the retail dealer would no doubt also have his remedy.—A case against Bridget Feeley, trading as B. Feeley & Co., wholesale dealers, of High-street, Birmingham, for selling margarine which was not properly labelled, was then proceeded with.—Mr. Willcock explained that this case was on a different footing to the last, and he was instructed by the County to press it. The last defendant was a perfectly innocent purchaser, having sold that which he believed to be butter, and that which he had bought for butter. After the purchase had been bought in the last case, Mr. Toy (the assistant inspector) reported what had been stated, and in consequence of these and other statements the inspector tried to find out whether the retailers were innocent persons, and whether anyone else was to blame. In view of this, Mr. Glover communicated with the inspector, and the case was adjourned. Mr. Bembridge, on the 21st April purchased another parcel of butter which was at his request delivered at his shop in Price-street. Mr. Van Tromp called before the parcel was open, and the "butter" was found to be wrapped in plain papers and not labelled, as demanded by the Margarine Act. Mr. Van Tromp took samples, and it was clear from the analysis that the "butter" was of different qualities, as one portion had 83 per cent. of margarine and another only 11 per cent. of butter. Mr. Bembridge only dealt with Feeleys, and he was before the Bench for committing a fraud upon the purchaser. Not only did his character suffer, but his trade also for being fined for contravention of the Act.—Mr. A. H. Hebbert (magistrates' clerk) thought they had no jurisdiction over the case.—Mr. Willcock pointed out that the purchase was made in Smethwick, as the goods were delivered and paid for by Mr. Bembridge at his shop in Price-street.—Mr. Adcock, for the offence, said that unfortunately the parcel which was bought on the 21st ult. was not labelled, but on the invoice it specified "Dorset Mixed." His client's assistants were very busy at the time, and it was quite a mistake that

it was not labelled as it should have been.—An assistant was called who gave evidence in support of this statement.—Aaron Bembridge was fined 10s. and costs (22s. 6d. in all), and in the other case a fine of £20 and costs was imposed. Mr. Adcock asked for a week in which to pay the fine, but Mr. Willcock objected. He urged that they could afford to pay that amount out of their profits, pointing out that 5d. per lb. was the price of margarine and not 10d.—Mr. Adcock: That is better than solicitors' fees (Laughter).—Mr. Willcock asked for the analyst's fee.—This application was granted, the total amount of the fine and costs being £22 2s.

AT North London Police Court, on May 27, George Harper, provision merchant, 567, Holloway-road, for selling butter containing 88 per cent. of foreign fat and for selling margarine without its being properly labelled; fined 20s., with 14s. 6d. costs. David Keer, 174, Tollington-park, for selling butter containing 60 per cent. of foreign fat, and selling margarine without a label; fined £3 with 54s. 6d. costs. Benjamin Lindsay, 176, Seven Sisters-road, for similar offences, the adulteration being 88 per cent. was fined £2, with £1 15s. 6d. costs. Anne Constant, 647, Holloway-road, the adulteration being 57 per cent.; 20s., with £1 15s. 6d. costs.

AT Manchester, on May 31st, Robert Wiseman, grocer, 296, Ashton New-road, Beswick, was summoned for selling margarine as butter. Mr. Rook prosecuted, and said this was one of the worst cases brought before the court. Inspector Houliston employed a policeman's wife named Hallworth to purchase the sample for him. She saw on the counter margarine duly marked and priced 4d., 5d. and 6d. per lb. Near to these was another parcel with no visible label, but over it were suspended a ticket on which were the words "Finest New Kiel, 1s." She purchased a sample of this, and Houliston, who had been waiting outside, then went into the shop, and on stating who he was, and that the sample had been purchased for him, the defendant invited him into the sitting-room. The Inspector told the defendant that he should have the sample analysed, and Wiseman replied: "It is no use having it analysed; I may as well tell you it is wrong. I have run short of Kiel."—and added something to the effect that he did not want his customers to know that, and have to send them away without being served. The sample was found to contain 25 per cent. of butter-fat and 75 per cent. of foreign fat. It was worth not more than 6d. or 7d. per lb., although sold at 1s. He (Mr. Rook) might add that the dish from which the supposed "finest new Kiel" was served was marked with the word "margarine." The letters were not visible to the purchaser. The defendant now pleaded that he had in a hurry made an unintentional mistake, but the magistrates said they could not believe any such statement. They believed that a "deliberate fraud" had been committed, and should mark their sense of the defendant's conduct by fining him £10, and costs.

AT Bolton, on June 1, Hugh McCormick, described as an assistant, 209, Halliwell-road, was fined £10 and costs on a charge of having sold butter not of the nature and quality of the article demanded. The Deputy Town Clerk, who prosecuted, said defendant was an assistant at the above address, and he believed that any penalty imposed upon him would be paid by the actual proprietors of the business. The Corporation had not learned to whom this business actually belonged. Of course it would have been better to have the man before the court. It was stated, further, that 1s. 1½d. was paid on the 12th ult. for what was understood to be one and a half pounds of butter. On analysis it was found to contain 80 per cent. of foreign fats. Defendant was said to be in the shop at the time of the sale. The presiding magistrate remarked that defendant was fined only a short time back, and that the public must be protected.

AT Dublin, on May 26th, several provision merchants were prosecuted for breaches of the margarine laws. Mr. Rice, solicitor, who represented the corporation, said that this class of offence was very much on the increase in the

city, and owing to the large and increasing sale of margarine as butter the butter industry was being seriously affected. Lawrence Cogan, 78, Lower Clanbrassel-street, was charged with having sold margarine without having it properly labelled. Defendant was fined £10 and costs.—Dora M'Evoy, 106, Bride-street, was summoned for a like offence. Before the inspector was supplied in this case he was told that the substance was a mixture. It contained 55 per cent. of foreign fats. A fine of £2 was imposed.—John Sheehan, Exchange-court, was also summoned for a similar offence. The analyst's certificate showed that the sample consisted wholly of foreign fats. The defendant, who had been previously fined £2., was now fined £10 and costs.—Patrick Caulfield, 27, Patrick-street, was fined £2 and costs for a like offence.

At Bristol, on May 26th, Mary-Hudson, Corbett-street, was charged with selling margarine without affixing a labelled wrapper. A fine of 10s. and costs was imposed.—George Knott, 14, Lippiett-street, was charged with exposing for sale margarine without a proper label. He was fined 5s. and costs.—Henry Robbins, 39, Lippiett-street, for a similar offence, was fined 10s. and costs.—Sarah Murphy, 39, Gloucester-lane, was charged with exposing for sale margarine without a proper label, and for selling margarine without a properly stamped wrapper. The Magistrates imposed a fine of 5s. and costs for each offence.

A MARGARINE APPEAL CASE.

A case of considerable importance to grocers, provision merchants, and the public in general, was heard on May 27th in the Recorder's Court Belfast, before his Honour Judge Fitzgibbon.

Mr. William Carson, J. P., Clerk of the Peace, was in attendance.

George Alcorn, farmer, Ballypalladdy, Doagh, appealed against the decision of the magistrates, who fined him £10 for delivering margarine wholesale to Francis M'Closkey, 2, Baltic Avenue, on the 10th and 14th February last, such not being enclosed in a packet duly marked "margarine," in accordance with the regulations of the Act. David M'Master, inspector under the Food and Drugs Acts, was the respondent.

Mr. Henry Hanna (instructed by Mr. P. Lavery) appeared for the appellant, and Mr. D. F. Spiller for the respondent.

Mr. Spiller, in stating the case for the respondent, explained that the latter was inspector under the Food and Drugs Act, and as such issued two summonses under the 4th and 6th sections of the Margarine Act of 1887 against the appellant in respect of offences committed on the 10th and 14th February. Francis M'Closkey, who was a grocer, had been waited upon by Alcorn, who asked him if he would take from him some prime butter and buttermilk. M'Closkey, believing that he was an honest man, and that he would supply him with pure butter, agreed to take 16lb of it, but declined to take buttermilk. That occurred on the 10th February. M'Closkey then proceeded to sell the butter, but some of his customers brought it back, and made complaints. In consequence of these M'Closkey put aside the remainder of the butter, and refused to allow any of it to be sold. On the 14th of February a lad named Oliver, who was in the employment of Alcorn, called again at the shop, and, delivering another lump of butter, asked for payment. Mr. M'Closkey asked him to send in his master, and as the latter did not come in he went down to the Public Health Office, and complained to the inspector. M'Closkey wrote to Alcorn to come in, and the inspector, in order to see him, called up at Mr. M'Closkey's shop on three consecutive days. Alcorn, however, did not come in, and on the third day M'Closkey met Oliver with a cart on the Antrim Road, and brought him to the shop, where he saw M'Master, the Inspector, who pointed out the butter, and asked him if it had been supplied by him. The lad said that was his master's

butter, and he also was able to identify the prints that he had delivered by marks on them. M'Master then took three samples, and divided them in the usual way. Professor Hodges, who got two samples, returned both as margarine.

David M'Master, the Inspector, was then called, and corroborated the statements of Mr. Spiller.

Francis M'Closkey gave evidence as to getting the butter from Alcorn and the price arranged—namely, the height of the market. When he sold some of it his customers brought it back. Witness examined it, and found that the inside was paler than the outside.

In cross-examination by Mr. Hanna, he admitted that he sent a letter to Mr. Alcorn, in which he stated that he had sent two samples for analysis, but at that time they were not forwarded to Professor Hodges. When the inspector came to his premises and took the samples of butter it was not exposed for sale.

Robert Oliver gave evidence as to having brought home on the cart to Alcorn boxes stamped "margarine." The servant girl took them from the kitchen to the churn-house, and he saw Mr. Alcorn cutting the contents with a gully knife, and squeezing it down into the churn. On the 13th February he saw Alcorn so engaged, and it was that stuff that was brought into Mr. M'Closkey's on the 14th February. The butter that he saw the inspector taking afterwards was the same butter that he brought in from Alcorn's on the 13th and 14th February. Witness had seen Alcorn on Thursday night last, when he said it would be telling him (Alcorn) a £5 note that he would win the case, for he would settle up with him about his (witness) wages.

This closed the respondent's case, and

George Alcorn, the appellant, was called and sworn. He stated, in reply to Mr. Hanna, that he had never any margarine about his place. He had often got groceries packed up in margarine boxes, and these had been brought by Oliver from the City for him. Witness always sent in pure butter, and he never kept anything else. He got the letter from M'Closkey after the inspector got the samples. Oliver had no power to sell any of his stuff.

In cross-examination by Mr. Spiller, witness said he had never cut anything up as deposed to by Oliver to put in the churn. He often got butter from some of his neighbours when he feared his own stock would run short, and this he mixed with his own.

Martha Coulter swore she never saw any boxes of margarine coming home to Alcorn's house. She never carried any boxes of margarine to the churnhouse. Often she saw empty boxes labelled "margarine." Butter which her master got from Robinson he had mixed with his own. Besides witness and her master there was another servant man in the house.

This was all the evidence.

Mr. Hanna, who said he relied upon the law in the matter, contended that the margarine from which the inspector took a sample was not exposed for sale. He quoted section 13 of the Food and Drugs Act, and held that, as there was no sale to the inspector, there could be no conviction under that section, and argued from the wording of the 14th section that the case could not be sustained, inasmuch as the butter was not bought by Mr. M'Closkey for analysis, but the intention of selling it. Moreover, the lad Oliver was not an agent to sell, but a mere carter. He further held that there was no notification to Alcorn, because the letter written him on the 16th did not come into his possession until the 18th February, and quoted several sections to show that the action could not be sustained.

His Honour, in delivering judgment, said in that case no person who had heard the evidence could have the slightest doubt but that the appellant was guilty of the offence charged against him. He (his Honour) had not the smallest doubt but that the statement of the boy was true that he brought home margarine, and was in the habit of putting it into the butter. He got boxes home, in which there was margarine, and the suggestion to him

(his Honour) was "Oh, these boxes came home; they were empty; and they were sent home." From the evidence of the boy it was evident that he was in the habit of getting them frequently. Where were the persons who sent the empty boxes? He supposed they were in town, and could have been produced. He (his Honour) could come to no conclusion but one. He (the appellant) did not produce them because he knew they would not be able to contradict the boy. The girl who was examined said there was a man servant in the house, but he was not produced. Why? Because the servant man would not have been able to protect him (the appellant). The boy was produced, who was a servant at the time, and his evidence was perfectly distinct—that he (the appellant) brought home margarine from Belfast, and that he put it into the butter, and sold the butter. The question was, was that gentleman entilted to escape, he being guilty of the offence, by reason of the difficulties created by the various Acts of Parliament on that subject? A letter had been put in, bearing date 16th February. "Oh," he (the appellant) said, "I didn't receive that letter until the 18th." Why didn't he receive it? Because it was his own omission to send to the post office, where letters lay until he sent for them. He (his Honour) had no doubt but that he would have received it if he had sent to the post office. Had he (the appellant) any intimation about what was going on? He plainly had, because he was sent for, and desired to call, and he could not be got call. Why? Because he knew what was going on. The boy who delivered the butter, it was said, was not an agent to sell. But the boy was acting in every way for his master, because he got the price of the butter, and was dealing on behalf of his master, who avoided calling. In his (his Honour's) opinion, the appellant had brought himself within the Act, and he could not escape. The only question of difficulty with him (his Honour) was whether he ought not to increase the penalties, whether he ought to double them. The offence was a very serious one, a very aggravated one.

Mr. Hanna—It is the first time he has ever been convicted, your Honour.

His Honour—It is the first time in which he has been caught.

Mr. Spiller—The first time he has ever been caught, your Honour.

His Honour, continuing, said it was very difficult to detect matters of that kind. There were two cases against the appellant, and it amounted to a fine of £10. He (his Honour) adopted what the magistrates had done, and would confirm their decision, with 20s. costs in each case.

Mr. Hanna asked his Honour to state a case, but

His Honour refused to do so.

MILK ADULTERATION.

SERGEANT KENNEDY summoned James Sexton for selling milk to the complainant which contained 11 per cent. of added water.

The Sergeant produced Sir Charles Cameron's certificate, which stated that the milk contained 11 per cent. of added water.

The Defendant—I did not put water in the milk. I sold it to you as it came from the cow.

Mr. Hewson—Did you see the cow milked yourself?

Defendant—No, sir.

Anne Nash deposed that she milked the cow, and she put no water in the milk.

Mr. Hewson—Did you ever put water in milk?

Witness—No, sir.

The Magistrates fined the defendant 5s. and costs.

At Wolverhampton Police Court, on May 31, Charles Price, farmer, Featherstone, was charged on five summonses, in two cases with selling milk containing added water, and in three cases with selling milk from which a portion of the original fat had been abstracted.—Mr. G. F. Allwood (inspector of food and drugs for the borough)

prosecuted. He said the defendant occupied a very large farm, and was a member of several governing bodies. He had been in the habit of bringing large quantities of milk to Wolverhampton, and witness had purchased, or caused to be purchased, samples of his milk on different days. In five cases the analyst found that water had been added or fat abstracted.—Defendant denied that water had been added to the milk, or fat abstracted, and said he had been in the habit of supplying Wolverhampton people for twenty years.—The Stipendiary imposed a fine of £5 and costs in two cases of selling milk with added water, and £3 and costs in one case for abstracting fat. Costs were ordered to be paid in the other cases. The fines and costs amounted to £17.

At Coventry, on June 1st, a milk dealer named Sanders, Cook Street, was fined 10s. and costs for selling milk which the sanitary inspector said the public analyst had certified to contain 14 per cent. of added water. Mrs. Sanders said that the milk was sold as delivered by the wholesale dealer.—George Townend, of Middleborough Road, was summoned for selling adulterated milk. Mr. Maddocks said defendant did not add any water. The analysis showed the sample taken to be deficient of 15 per cent. of its natural fat. Defendant was fined £1 and costs.

WATER AT SPIRIT PRICE.

At Hereford, on May 25th, William Noden, Golden Lion Inn, Grandstand-road, was summoned for selling to the prejudice of the complainant, Sidney Protheroe, certain whiskey which was adulterated with 20.8 per cent. of water over and above that contained in 25 degrees under proof whiskey on April 25th.—Mr. Protheroe, Sanitary Inspector, said that on the day in question he called at the Golden Lion Inn; he asked for half-a-pint of scotch whiskey, but Miss Noden said that she had only a quart; after he had received this, he was told that it was Irish; he paid for it and said that he had bought it for the purpose of analysis; he offered her one third part of it in a bottle, but she declined to take it; he sent one part to the public analyst (Dr. Bostock Hill), whose certificate showed that the whiskey had 20.8 per cent. of water over and above that contained in 25 degrees under proof whiskey.—Miss Sarah Noden, for the defence, said that Protheroe did not offer her one third part of the whiskey.—William Slaymaker, clerk in the office of the Inspector, for the prosecution, said that Mr. Protheroe asked Miss Noden if she would like one third part of the whiskey, but she declined to take it.—The Chairman said that the defendant had made himself liable to a penalty of £20. Perhaps he had made a slight mistake in breaking the whiskey down. He would be fined 5s. and costs.

MILK WARRANTES.

At Bow-treet, on May 31, The Sudbury Dairy Co., of Broad-street, was summoned for selling milk minus 13 per cent. of fat.—Mr. H. C. Jones supported the summons on behalf of the St. Giles' Board of Works; Mr. Ricketts defended.—The summons had been adjourned by Sir James Vaughan to consider whether, as contended by Mr. Ricketts an agreement with a label on the churn stating that the contents were pure constituted a warranty within the meaning of the Act. The Magistrate now quoted several decided cases, and said it appeared from these that to constitute a warranty no special document was necessary. If was sufficient if a contract or invoice could be produced from which it appeared that a particular article had been ordered and supplied. It appeared to him that the documents put in on this case were quite sufficient to protect the defendants, and he must therefore dismiss the summons.—A similar summons against Henry Hanson, of New-yard, Great Queen-street, was dismissed on the same grounds.

COFFEE.

At Nottingham, on May 27, George Porter Jackson, grocer, Eastwood, was summoned for selling adulterated coffee. Mr. Searlby defended. Colonel Story stated that he sent an assistant to purchase half a pound of best coffee at defendant's shop, and 10d. was paid. The analyst's certificate showed 95 per cent. of coffee and 5 of chicory. In answer to Mr. Searlby he said that he had purchased articles from the defendant on previous occasions, and the articles had always been found to be genuine. Mr. Searlby in defence argued that the case was not one of wilful adulteration in any sense of the term. It was due to an accident in relation to the mixing of three different kinds of coffee of the part of a boy then engaged in the business, who disobeyed his instructions. The defendant and his assistant, James Crampton were sworn, and both denied all knowledge that the coffee was anything but perfectly pure. The Bench held, however, that the defendant was responsible for what his employe's did, and imposed a penalty of 40s.

CAMPHORATED OIL.

At Birmingham, on May 26, Joseph Gilman (trading as Gilman & Son), Stafford-street, was summoned for selling camphorated oil containing 74 per cent. of a foreign oil, which was not olive oil, as required by the "British Pharmacopœia." Defendant who said he should not have sold the oil if he had known that it was not pure, was fined £5 and costs.

ADULTERATED LIME JUICE.

At Edinburgh, Lewis Dimarco, ice cream dealer, 72, Leith-street, was charged with having, on March 23rd last, within the shop, 89, Leith-street, occupied by him, sold a bottle of lime-juice which was not of the nature or substance of the article demanded. He pleaded not guilty, and was defended by Mr. Murray. James Lyon spoke to asking for a bottle of lime-juice, for which he paid 10d. Cross-examined, Witness admitted that he refused to take a bottle of lime-juice cordial, as he asked for lime-juice, and he was not prepared to say if there was a single retail dealer in Edinburgh who sold pure lime-juice. By the Sheriff: He wished to get the juice of the lime in an absolutely pure state. Thomas Waterston corroborated, but admitted that the woman, when serving him, said this was "what they sold for lime-juice." It was taken out of a gallon jar, and put into a black bottle. Dr. Falconer King, city analyst, said the sample was not by any means pure lime-juice. It was a mixture of water, sugar, and acid, with possibly a small quantity of lime-juice added to give it flavour, and, practically, was not lime-juice in any sense whatever. Cross-examined: Lime-juice was essentially a solution of citric acid in water, a certain amount of potash and vegetable matter. By the Sheriff: There was both water and sugar in pure lime-juice, and practically the only thing that was in this which was not in pure lime-juice was the acid, which was tartaric. Pure lime-juice, without various things being added to it, would only keep for a certain time. The Sheriff here stopped the case, which he did not think, he said, was made out. In the first place, the statement of the woman to the inspector that this was what they sold for lime-juice was tantamount to an admission that this was not lime-juice; but there was a deeper objection to the prosecution, and that was that this was not sold to the prejudice of the purchaser, for the only thing that was not in pure lime-juice was tartaric acid, which might be put in to preserve it, for anything that he knew. He did not suppose it was ever sold as the expressed juice of the lime, which was not very common here, and he thought it was a matter of common knowledge that enormous number of lime-juice cordials were sent out in ships, which was not pure lime-juice. At any rate, he could not hold that this was not of the nature or substance of the article required when it was known that this was only the thing sold for it, and he found the accused not guilty.

CATTLE FEEDING AND THE SUPPLY OF MILK.

On June 1st, before the Mayor of Barnsley (Ald. Wilkinson), Mr. W. Jackson, and Dr. Horne, a Worsboro' milk dealer, named Herbert Green, was brought up charged with selling adulterated milk.—Mr. Horsfield, Town Clerk, prosecuted.—It seemed that on the 1st of May William Waterton, inspector, took 14 samples of milk for analysis. Of these 12 were satisfactory and two suspicious—the present case being the only one in which action was warranted. The certificate of Mr. A. H. Allen, public analyst, showed that the sample contained 88 parts milk and 12 parts added water. This conclusion was mainly based upon the fact that the sample contained only 7.43 per cent. of non-fatty solids, whereas normal milk contained 8½ per cent. of non-fatty solids. Defendant said he took his milk vessels to the place at six o'clock in the morning, and fetched them away at eight. He did not see the milk, nor what was put into the vessels, until he served it out. If there was anything wrong it arose from this, that the turnips and Indian corn were finished, and the cows could not be turned out to grass. Whilst another supply of corn was being obtained the cows had nothing but grains and a few crushed oats.—The Mayor fined defendant 20s. and costs, remarking "You should keep the feed up!"—Defendant: Well, the feed is the cause of it.—The Mayor: The public have no right to have to suffer for that, you know.

MILK BREAD HELD TO BE NOT FANCY BREAD.

MESSRS. Hetherington Bros., who have an extensive bakery business in Blackpool and district, were summoned before the County Justices at Kirkham, last week, for selling bread otherwise than by weight. Mr. Adye, of Fleetwood, was the solicitor for the prosecution, and Mr. Callis, of Blackpool, appeared for the defendants, who denied the offence, and the case was fought very determinedly. It appeared that the County Council Inspector of Weights and Measures (Etchells) found a vanman belonging to the defendants delivering bread near Cleveleys Station, and he bought a loaf. The vanman asked which loaf he would have, and he chose a small one, which he afterwards found weighed 1 lb. 7½ oz. He paid 3d. for the loaf. The man, when asked the weight of the loaf, said he did not know; that bread was not sold by weight; it was milk, and therefore fancy bread. The man had scales in his van, and they were right. He had two sorts of loaves, the one being a 2 lb. loaf. He saw no difference in them except in the colour. The loaf had not been analysed. He did not know the size or shape constituted fancy bread, but the materials used.

Mr. Callis said the Act of Parliament under which the case was brought, was passed during the time of the Bread Riots to protect poor people, and did not apply to present conditions, as there was so much competition, and people were quite alive to what they were doing. Messrs. Hetherington had the largest bakery in the district, and made all descriptions of bread. This bread was sold as fancy bread, not by weight, but by the loaf, and there was no intention to cheat. Hundreds and thousands of such loaves were sold in London, and there was no thought of a prosecution. Where was the fraud in this case? He was not going to disclose the secrets of the trade for the benefit of the Court, or for the public, but Mr. Hetherington would state the constituents without giving quantities. He would write down all details if the Bench wanted it. He submitted that in this case no one had been cheated, and no fraud had been committed.

Mr. Joseph Hetherington, one of the defendants, said the common 2 lb. loaf produced consisted of flour, water, yeast and salt. The flour was Appleby's three S (S.S.S.). The smaller loaf was made of Appleby's four S flour, a higher grade flour, with new milk possessing all its cream, lard, yeast, salt and water; and there was additional labour in the kneading to produce the finer texture. The common loaves were 2 lb., the fancy loaves were 1½ lb.;

both were at 3d. He called the smaller loaf Snowflake Tea Bread, because of its whiteness. It was not sold by weight. It was a superior bread which people bought for tea, and there was a great demand for it. They had the largest business in retail, and they had never been asked to weigh it. He had never heard of a prosecution for the sale of this bread.

Cross-examined: Defendant said nearly every baker sold milk bread. People did not "taste and try before you buy."—(Laughter.) They did not call it fancy bread because of the size or the shape of the loaf, but because of its quality entirely.

Mr. William Darbyshire, managing director of the Lancashire Cake Bakery Company, Limited, gave corroborative evidence. The little loaf passed under the denomination of fancy bread on account of its ingredients. He had never heard of a prosecution in respect to it.

The Bench fined the defendants 10s. and costs,

INTERESTING BREAD CASE.

Selling Bread by the Score.

At the Kirkham Petty Sessions, last week, the Lancashire Cash Bakery Company, Ltd., were summoned for selling bread otherwise than by weight. Mr. Adye, of Fleetwood, appeared for the prosecution, and Mr. W. Blackhurst, of Preston, was for the defendants, who denied the offence.

Inspector Etchells, employed by the Lancashire County Council, said he saw a vanman in the employ of the defendants delivering bread to Mrs. Kate Wright, a grocer at Thornton. He discovered that the man had delivered 20 loaves, and had not weighed them. In reply to his questions the man said that the total weight of the 20 loaves was 32 lbs., the weight of each loaf was 1 lb. 10 oz. The inspector and man then went into Mrs. White's shop, and the former weighed two loaves separately, and found that one was 1 lb. 12½ ozs. He then weighed the 20 loaves, five at a time, and found the aggregate weight to be 34 lbs. 10 ozs. It was ordinary bread. The man had scales in his van and they were right.

Mrs. White said she usually bought the bread from defendants by number and not by weight. She bought 10, 15, or 20 according to requirements. On this occasion she bought 20 loaves and the man told her the total weight was 32 lbs. She paid for the bread next day.

Mr. Blackhurst submitted that there was no case against the defendants. The bread was practically sold by weight. Every loaf was weighed singly before the man went out, and he knew that every loaf was 1 lb. 10 ozs., or over. The vanman had the scales with him, and if Mrs. White had asked for the loaves to be weighed he would have been bound to weigh them in her presence. But she made no such request and there was no case to answer.

The Bench dismissed the case.

REFUSING TO SELL FOR ANALYSIS.

At Chichester, on June 3, Herbert Wiles, of the Wheatsheaf Inn, Bognor, was summoned for refusing to sell half a pint of whiskey for analysis.—Sergeant Goble, stationed at Bognor, deposed that, acting under instructions, he visited the Wheatsheaf Inn, West-street, on May 24th. The defendant was sitting in the public bar with another man, while his wife was standing at the front door when he entered, but she went from there to behind the bar. Witness, who was in plain clothes at the time, called for twopenny worth of whiskey, and Mrs. Wiles drew it from a keg on the shelf. He next asked for half a pint of whiskey from the same keg, at the same time producing a bottle and half-a-crown. Mrs. Wiles took the bottle, and said "I don't think I can let you have it, as I shall not have enough for my regular customers." She turned to her husband and said "We can't spare half a pint of whiskey, can we?" to which he replied, "No, we have not half a pint to spare." Defendant then came

to where witness was standing, and Mrs. Wiles handed the bottle back, saying "I cannot let you have it." Witness placed the bottle and the money on a narrow shelf, and said "You must serve me. I want it as a sample to be analysed by the Public Analyst." Mrs. Wiles and "We are expecting the brewer with some soon; if you could wait or call again. I can let you have brandy, rum, or gin, or I will send out and get half a pint of whiskey." Witness said "You serve me with half a pint of whiskey out of there (pointing to the particular keg), and you send out for some, if you should want some, for your regular customers, before the brewer comes." Defendant said to Mrs. Wiles, "Leave the whiskey alone. I will take the responsibility."—Defendant gave evidence on his own behalf, his explanation put briefly being that he was almost run out of whiskey when the officer called, and that only the day before he had sent an order for two gallons to the brewers. A man who came in just after the serjeant left was supplied with what whiskey there was in the keg. It turned out to be just a bare two pennyworth, and the customer said it was a little thick or cloudy. The supply from the brewers arrived about twenty minutes or half an hour after the serjeant's departure. Witness did not know who the officer was until he announced himself. He thought he was a visitor in the town. Witness had on several previous occasions supplied spirits for analysis. Nothing was said to the serjeant about regular customers.—In cross-examination witness admitted that when keeping a house at Raghmagh, he had been fined for adulteration. He knew there was not half a pint of whiskey in the keg spoken of by the serjeant, because he had measured it the night before. He would have been pleased to have supplied the half pint of whiskey if there had been enough for him.—Walter James Howell, butcher, of 4, Scott-street, Bognor, who was sitting in the bar out of the serjeant's sight on the occasion in question, gave corroborative evidence. Finding there was not enough whiskey the landlord told the serjeant, "he could not have a shirt off a naked man's back."—Mary Wiles, wife of the defendant, also gave her account of the matter, which agreed with the evidence of the two previous witnesses.—A drayman, named Nash, in the employ of Messrs. Henty and Sons, was also called to prove the delivery of the whiskey on the day in question.—The Magistrate, after a short consultation, decided to dismiss the summons, but at the same time the Chairman intimated that they quite believed the evidence of the Serjeant.

ISLINGTON VESTRY AND SALE OF FOOD AND DRUGS BILL.

THE Public Health Committee have reported:—"That pursuant to Vestry reference of the 7th April, 1899, it has considered the circular letter from the Vestry of Battersea, dated 29th March, 1899, intimating that it has had under consideration the above named Bill recently introduced into the House of Commons, and that it has addressed a communication to the Local Government Board taking exception to certain clauses therein, and inviting this Vestry to take similar action; that in connection with the subject of such letter, it has considered the subjoined report of the Vestry's analyst which has been approved by the committee." The committee recommended "that the analyst's report (with the exception of his suggestion that samples of milk and other articles should be permitted to be taken during transit) be approved and adopted, and that a communication be addressed to the Local Government Board requesting the Board to take steps with a view to the Bill being amended in the direction indicated."

The report of Dr. F. L. Teed, the Vestry's analyst, was as follows:—"I have carefully considered the recommendations of the Battersea Vestry with regard to this Bill and fully agree with both of them. Even should no Court of Reference be constituted, it is, I consider, highly desirable that there should be full disclosure to the purchaser of butter or milk, of the quantity and nature of

any preservative that may be present. With regard to the form of certificate, apart from the reasons advanced by the Battersea Vestry I consider it undesirable that the authority that has to decide on questions of analytical data, a court of appeal from the analyst, should also be the authority for deciding in what form the analyst whose work they may have to review should state the results. In the event of no Court of Reference being constituted, the Board of Agriculture appears to me to be the proper authority for drawing up the form of certificate. Should the Vestry be approaching the committee (I understand the Standing Committee on Trade) that is now in charge of the above Bill, I think they might at the same time point out to the committee that the omissions from the former Government Bill, on which I made the Vestry a long report, are also omissions from this Bill, and that it is desirable they should be incorporated. The omissions are briefly: No Court of Reference constituted. No means are provided for prosecuting the giver of a false warranty (see case of *Mernagh v. Kerr* and *Regina v. Smith*). The taking of milk at place of delivery should be extended to other articles, and should be permissible in transit. No attempt is made to prevent the publican from contracting himself out of the Act by the exhibition of an almost illegible notice. The definition of 'food' requires extending, so as to include substances like baking powder, which at present are not 'food,' although used in its preparation."

Consideration of the above was resumed, and Mr. Cuffin's motion that the report and recommendation of the committee be received and adopted, was carried without further debate.

ADULTERATION IN DURHAM.

THE report of Mr. B. Scott-Elder, Chief Inspector for the county of Durham, affords some useful information. During the past three months the county inspectors have submitted 178 samples of Food and Drugs for Analysis. In only two cases has it been necessary to institute proceedings, although the following four samples are reserved for consideration:—

No. in Analyst's Schedule.	Article.	Result of Analysis.
17 ...	Malt Vinegar ...	Not Malt Vinegar
21 ...	Malt Vinegar ...	Not Malt Vinegar
36 ...	Malt Vinegar ...	Not Malt Vinegar
37 ...	Malt Vinegar ...	Not Malt Vinegar

Seidlitz Powders.

There have been two prosecutions for Seidlitz Powders which were deficient in the ingredients prescribed in the British Pharmacopœia. These powders, although sold by small traders, are generally compounded by wholesale chemists, and are not likely to be tampered with by the retailer. In both of the cases the wholesale traders desired to take the full responsibility for what they considered carelessness on the part of their packers, to pay all the costs and expenses of the defendant, and at the same time undertook to call in all their other powders which were on sale in any part of the county, so that they might be compounded afresh more accurately. Under these circumstances, and considering that they were the first of the kind in the district, I asked that only the costs of the court be inflicted, but the Magistrates held that these powders were very extensively used as a medicine by people in the country districts, and inflicted a small penalty, at the same time expressing their satisfaction that samples were being taken. I have one other case pending, in which the circumstances are exactly similar, but I feel sure that this form of adulteration will be very speedily stamped out.

Camphorated Oil.

Respecting sample No. 56 (Camphorated Oil, containing 60 per cent. Cotton Seed Oil), the retailer has

informed me, and I believe his statement, that he bought the article as pure, although he holds no express written warranty to that effect. He has, however, communicated with the wholesale dealers, who, while regretting the occurrence, suggest "nothing except that you appear in the case and make the best of matters. Any cost you may be put to we will pay." A summons has been issued against the retailer, as there are no means by which the wholesale dealers can be reached.

A New Margarine as Butter Conspiracy.

In consequence of information which reached me from another district, a larger number of samples of Butter have been purchased during the quarter than in any previous quarter for some years back. It appears that certain firms are offering to supply shopkeepers with Margarine on the following conditions:—

- (1) That it would be supplied at half the price of Butter.
- (2) That it would be invoiced as Butter.
- (3) That it would be supplied in plain casks, *i.e.*, without the word "Margarine" branded thereon.
- (4) That, for an additional 4s. per cwt., the wholesale dealers would bear the fines, costs, and expenses in the event of any prosecution resulting from the transaction.

This I regarded as an organised conspiracy to defraud the public, and having ascertained that my information was perfectly correct, I issued special instructions to the district Inspectors not to hesitate to use other than the ordinary means to detect the fraud, but although 35 samples have been obtained and submitted for analysis not one adulterated sample appears to have found its way into this county. Your Inspectors will continue to exercise vigilance in this matter.

Malt Vinegar Warranties.

A CASE of Malt Vinegar has occurred, which brings into prominence one of the weaknesses of the present Acts. The Vinegar in question was not obtained from Malt, but was simply dilute Acetic Acid. The retailer had in his possession a written warranty, and the false label on the cask was sufficient to justify proceedings against the wholesale dealer, but on examination of the dates it was found that the warranty and label were issued six months and eight days previously, and as the limit of time for instituting proceedings is six months, the matter could be carried no further.

Ground Cassia Warranty.

The case of Ground Cassia, adulterated with 10 per cent. of mineral matter, and which at the date of my last report stood adjourned owing to the production of a written warranty, has also been abandoned, and this Department has actually been called upon to bear the cost of the summons. It appears that the trader held a warranty from his merchant, who in turn held a warranty from the larger wholesale dealers in another county, and they in turn held a warranty from the Importers in London. A recent decision of the Higher Courts (*Derbyshire v. Houlston*) renders it imperative for the prosecution to prove that a warranty was "wilfully" given. It will be readily seen that such evidence could not be furnished by this Department without considerable expense and trouble, and with the probability of having to take proceedings in London. The matter was therefore allowed to drop.

I beg to call your attention to the Food and Drugs Bill at present before Parliament, and which has already passed its second reading. I regret that in its present form the Bill does not remove many of the difficulties which have confronted us in this county from time to time, some of which are referred to in this report, and I would respectfully suggest that the County Council be asked to use its influence to secure the several amendments which will be submitted for your consideration.

MEDICAL OFFICERS OF HEALTH ON THE NEW FOOD AND DRUGS ACT.

Public Health, the organ of the Incorporated Society of Medical Officers of Health, says of Clauses 18 and 19: "They threaten to jeopardize the whole of the work under the Sale of Food and Drugs Acts. They are so important that we quote them here *in extenso* :

"18.—(1) When any article of food or drug has been purchased from any person for test purposes, any prosecution under the Sale of Food and Drugs Acts in respect of the sale thereof shall, notwithstanding anything contained in section twenty of the Sale of Food and Drugs Act, 1875, be instituted within twenty-eight days from the time of the purchase.

"(2) Particulars of the offence or offences alleged and also the name of the prosecutor shall be stated on the summons.

"(3) A summons shall not be made returnable in less time than *fourteen days* from the day on which it is served.

"(4) There must be served with any such summons a copy of any analyst's certificate obtained on behalf of the prosecutor.

"(5) Section 10 of the Sale of Food and Drugs (Amendment) Act, 1879, is hereby repealed.

"19.—(1) For the purpose of Section 25 of the Sale of Food and Drugs Act, 1875, an invoice shall be deemed to be a warranty without the addition of express words of guarantee, but a warranty or invoice shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts unless the defendant has, within seven days after service of the summons, sent to the purchaser a copy of such warranty or invoice, with a written notice stating that he intends to rely on the warranty or invoice, and specifying the name and address of the person from whom he received it, and has also sent a like notice of his intention to such person.

"(2) The person by whom such warranty or invoice is alleged to have been given shall be entitled to appear at the hearing and to give evidence, and the court may, if it thinks fit, adjourn the hearing to enable him to do so.

"(3) A warranty or invoice given by a person resident outside the United Kingdom shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts, unless the defendant proves that he has taken reasonable steps to ascertain and did in fact believe in the accuracy of the statement contained in the warranty or invoice.

"(4) Where the defendant is a servant of the person who purchased the article under a warranty or invoice, he shall, subject to the provisions of this section, be entitled to rely on Section 25 of the Sale of Food and Drugs Act, 1875, and Section 7 of the Margarine Act, 1887, in the same way as his employer or master would have been entitled to do if he had been the defendant, provided that the servant further proves that he had no reason to believe that the article was otherwise than that demanded by the prosecutor."

The clauses are interdependent as relates to the question of warranty, and this question is itself of a twofold nature. Assuming the vendor of the sample makes good his defence with the proposed legislation, the giver of the warranty cannot be reached because (a) the summons cannot be heard earlier than fourteen from service; and (b) the proceedings must be instituted within twenty-eight days, which would be exceeded by the time the case was first heard. There is no provision for summoning the giver of the warranty immediately after receiving the notice in the terms of Clause 19 (1), as there should be. The result must be that a vendor will prove his warranty, and so far as we can see, no one

will be punished for the original offence. Then there is a difficulty in making an invoice a warranty. How is it to be demonstrated that the invoice put in by the vendor of the sample as his warranty is the invoice covering the goods from which the sample was taken? We may imagine the case of an invoice covering pure butter being sworn to as that covering a butter mixture from which a sample has been taken. If the invoice is to stand as a warranty, it should be required that the invoice should specify the marks on the packages, goods, etc., and the time during which such invoice should hold good should be limited.

Personally we consider these two clauses so dangerous that we would rather not have the Bill if they are to stand, and we trust the Government will refuse to go on with the measure unless the clauses be further materially amended or (preferably) Clause 19 be struck out.

THE FOOD AND DRUGS ACT IN PAISLEY.

UNDER the provisions of this Act, 228 inspections were made, says Mr. Kelso in his annual report, and 71 samples purchased and submitted to the analyst. Of these, 46 were samples of milk, and 38 were certified pure, 3 of doubtful purity, and 5 adulterated. The necessity for a fixed standard for milk has long been urged. At present it is the milk of the cow of the poorest quality that has ever been known, that we have to face in dealing with milk in the law courts, instead of that of average quality. This is not a matter that the inspector can set right. The public and local authorities should make themselves heard by pressing for a provision for a fixed standard being inserted in the Food and Drugs Amendment Bill at present under consideration in Parliament.

In furtherance of the observance of the provisions of the margarine act, 157 inspections were made. Eight samples were taken of what was suspected to be margarine, but not labelled as such. Three of these proved to be butter and five margarine. Five shopkeepers were warned for insufficient labelling and slight irregularities, and not confirming to the description of wrapper this substance should be wrapped up in when sold.

GROCERS AND THE PHARMACOPŒIA.

THE Bradford and District Grocers and Provision Dealers' Association has issued to all members of the trade a copy of the following circular, drawing their attention to the changes in the Pharmacy Law, which may affect them:—

We beg to call your attention to several recent prosecutions under the Food and Drugs Act, for selling articles that are included in the British Pharmacopœia, and that are not of the nature and strength required by law. We therefore advise you that if you have any of the articles named below, or others that are included in the B.P., to at once satisfy yourself that those are of the nature and strength required. If you have purchased from a firm of any reputation you will have no difficulty in making arrangements to exchange the goods. But it is of importance that you look into this matter. Hoping you will understand the motive in which this advice is sent to you, we are, sir or madam, yours obediently (for the committee), H. Housman, Secretary.

Four

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Liquorice powder.

Camphorated oil.
Tincture of rhubarb.
Seidlitz powders.
Sal Volatile.
Gregory powder.
Sweet spirits of nitre.
Arsenical soaps.
Kaye's essence of linseed.

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Bound volumes of Vol. I., II., III., V., and VI., may be obtained from E. W. ALLEN, 4, Ave Maria-lane, Paternoster-row, London, E.C. Price 5/- each.

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Food and Sanitation.

SATURDAY, JUNE 17, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

All communications for the Editor of "Food and Sanitation" must be addressed to

4, AVE MARIA-LANE,
LONDON, E.C.

THE GOVERNMENT AND ROCKEFELLER'S DEADLY 73° REFUSE AMERICAN OIL.

Just now Englishmen are busy shaking hands with themselves that we are not as the French are. We have no lies nor corruption in official circles. Our legislators

are immaculate, bribery is unknown in our national "talking shop," and generally speaking we are the salt of the earth. It is well for our smug faced complacency that there are a few Journals in England speaking truths and foremost in this good, if unthanked work is our contemporary "The Star." Under the pregnant heading:—

"CROOKED TACTICS OF THE 'ABEL MEN' AT THE HOME OFFICE.—"The Star" discloses some ugly facts. It brings to people's mind what Dr. Dupre said in November, 1897. "If people thought they would get legislation on the subject to raise the flash-point, they would be very much mistaken."—To do them justice, the officials at the Home Office have lost no opportunity of making that boast good. For instance, let us examine the return on American petroleum standards—prepared by the "Abel men at the Home Office"—which Mr. Jesse Collings, M.P., used in the last half-hour of the debate on Mr. Reckitt's bill on 15th March.

Mr. Collings stated that the return was based on information obtained by the Foreign Office as to the petroleum standards legalised in the various American States. He summarised the result as follows:—

States with 63° Abel standard	...	...	5
" " 73° " "	...	...	7
" between 73° and 100° Abel	...	...	6
" 100° and over...	...	...	6
" with no law	...	...	10
" making no reply	...	...	10

Setting aside the incompleteness of a return which avowedly omits to deal with 25 per cent. of the States, the vital fact to remember is that the figures given are not based on the Foreign Office reports to all, but on the so-called "equivalents" assigned by the Home Office officials, whose low-flash proclivities are notorious.

THE FACT.—Not one of the American States has fixed a standard under 100 Fah. Their standards vary, as the Foreign Office reports show, from 100 deg. to 125 deg. flash point, or from 110 deg. to 150 deg. fire point.

Now the compilers of these "equivalents" have taken it for granted that when the State Legislatures say 100 deg. Fah. they do not mean 100 deg. Fah. accurately registered but 100 deg. Fah. inaccurately registered. To justify this assumption they shuffle dexterously the terms "open" and "close" test.

There is no magic about the word "close" in relation to petroleum testing. The essential point is that the test cup shall contain sufficient petroleum, and be so protected from air currents that the vapor given off as it is heated shall reach the testing flame immediately, instead of being diffused into the surrounding atmosphere. The Petroleum Association open tester, which, on the sole authority of Sir Frederick Abel and Sir James Fergusson, was substituted for the "three chemists tester" in the Act of 1868, did not fulfil these conditions. It was a cup to be filled with oil, and the testing-flame was to be applied along a wire a quarter of an inch above the surface of the oil, thus allowing much of the vapor, which is heavy and flows like

water, to escape, and so giving the oil the character of having a higher flash-point than it actually possessed. That difference was in 1876 found by Sir F. Abel himself to be 27 deg., as all *Star* readers know. Now, these Home Office "equivalents" rest on that fact. They take all the American "open" testers, and assume that they are all as inaccurate and unreliable as the Abel-Fergusson open tester of 1868. They accordingly deduct 27 deg. from each of the State flash-points where an open tester is used.

THE VITAL POINT.—The first proof that this is unscientific and disingenuous is the fact that the "three chemists tester" was an *open* tester. Yet such was its construction that, according to Dr. Attfield, its result was equivalent to the Abel tester, and according to that ardent prophet of low-flash, Professor Boverton Redwood, it gave results only 3 deg. lower than the Abel. Therefore we have in our own official records an *open* tester which was practically as efficient and accurate an instrument for measuring the volatility of petroleum as the Abel close tester. And that is all that is necessary. Close or open, the vital point is—is it accurate?

Let us proceed to the next question. Are these American open cups accurate? Many of them are. The Acts of the State Legislatures provide for *half-filled* cups, so that the vapor shall collect in the unfilled half, for a testing flame "applied to the surface of the oil" (as Michigan and Missouri provide) or "brought into contact with the vapor" (as Nebraska stipulates). And not one of them is an instrument of the character of the Abel-Fergusson open cup of 1868. In this very memorandum Pennsylvania reports that the Tagliabue open tester gives much the same results as the Abel close test. Notwithstanding that definite statement, the "able men at the Home Office" assume that it doesn't, and reduce the Pennsylvania standard accordingly.

LOW-FLASH "RANGE-FINDERS."—But their zeal especially outruns discretion in the cases of Montana, New Jersey, and Rhode Island. Here the Foreign Office says there is "no test specified." Does that embarrass these low-flash "range-finders?" Not a bit. They assume that the tester in use, of which they know nothing, is an open tester, and an open tester as unreliable as the Abel-Fergusson tester, and so they knock off 27 deg. from the legal flash-point in each State to get the Abel "equivalent." All three States appear in Mr. Collings's totals as having flash-points under 100 deg. Now unfortunately for this method of statistical divination we know what tester is used in New Jersey. It is the Elliott close cup, fully equal to the Abel tester—a fact which is alluded to in this very report by the Pennsylvanian official who replies. New Jersey, therefore, instead of being equivalent to 73 deg. Abel is unquestionably 100 deg. Abel.

New York is another limelight illustration of the worthless character of this memorandum. The Foreign Office report says the flash-point is 100 deg. Then the Home Office comes in:—"The test is not given for the flash-point, *probably* Tagliabue," and so it knocks off the

mystic 27 deg. again, and puts New York into Mr. Collings's total of seven States with a flash-point of 73 deg. The fact is that ever since 1882 the tester in New York has been the Elliott close cup, which gives the same result as the Abel.

JUGGLING WITH THE TESTERS.—The same method is pursued when dealing with States which have a fire-point standard. The fire-point is the point at which the vapour is generated in sufficient volume to support combustion. Now, if sufficient oil is used, it is notorious that the flash-point, and the fire-point may be practically the same; Professor Attfield proved this in 1866 with a vessel five inches wide and one inch deep. Many of the States insist on not less than half a pint of oil being used with a surface of from five to nine inches, and in such a case the oil need be heated but little above its flash-point in order to reach its fire-point. But, still working on the misleading data of the old Abel-Fergusson tester, this memorandum assumes that the fire-point must be 20 deg. higher than the open flash-point, and the open flash-point 27 deg. higher than the Abel flash-point. It is all so simple when you know the trick. Deduct 47 deg. from every fire-point standard, and there you are. As a specimen, Pennsylvania has a fire-test of 110 deg., and the inspector says he believes that to be equal to 100 deg. or 102 deg. Abel. But the Home Office knows better. It deducts 47 deg., and so the result is 63 deg. Abel—a conclusion simply farcical.

Of the 10 States which did not reply, Mr. Collings might have learnt that nine have petroleum standards. Of the ten which have no State law, Mr. Collings might have learnt that most of the great cities in them have city laws which protect the State deriving its oil supplies from them. Others like Idaho are protected by the legislation of their neighbours.

We have shown that this document is statistically worthless, and controversially dishonest. Nothing in it has refuted the tables presented to the Select Committee by Mr. D. Steuart and Mr. Gray, which showed that no American State has a flash-point so low as 73 deg. Abel, and that 19 have a flash-point equivalent to 100 deg. Abel or more. And these 19, it should be remembered, comprise the overwhelming majority of the population of the United States."

Well, the Home Office knows this but it pays certain persons to obey Rockefeller, bulldoze parliament, and bring the honour of our legislature into line with that of American convicted contrivers of arson and dynamite explosions.

EXCESS WATER IN BUTTER.

At Listowel, on June 5, Sergeant Larkin, Inspector under the Food and drugs Act charged William Walsh, a farmer, in exposing for sale butter, which on analysis was found to contain 19.5 per cent. of water.—Mr. Flanagan said that there was no use going on with the case as the majority of the magistrates of that bench had expressed an opinion that there should be no conviction when the percentage of water was under twenty.—Mr. Creagh: I think that was distinctly understood.—Mr. McElligott:

Mr. Flanagan and Mr. Browne were not very well satisfied.—Mr. Flanagan: I would not feel justified in sticking to my opinion against the majority of the magistrates.—Mr. McElligott said that the ratepayers had to bear the expenses of these prosecutions when there were no convictions.—Mr. Horrigan, D.I.: If the court decides that we should not bring these prosecutions we will not do so, but I thought it was an open question. Would you let the case stand for a fuller bench.—Mr. Creagh: I don't know what kind of a whip would be made (laughter).—Mr. Flanagan: We will adjourn the case for a week.

MARGARINE AT BUTTER PRICE.

Arthur Simmonds, a provision merchant, of 37, Cyprus-place, New Beckton, was summoned by the East Ham District Council at Stratford, on June 3, for selling butter which on analysis proved to be adulterated.—Mr. C. E. Wilson prosecuted for the Council.—The sample was taken by Mr. J. G. Banks, the Council's inspector, and the Public Analyst reported that it contained 65 per cent. of margarine.—Defendant said the sale was made in his absence by an assistant, who neglected his duty by not asking whether butter or a mixture was wanted.—Defendant was fined £3 and 16s. 6d. costs.—Messrs. Edward Brothers, of 98, Albert-road, North Woolwich, were similarly summoned. The adulteration was 55 per cent. of fats other than butter fats, and a fine of £3 and 18s. costs was imposed.

At Aston, on June 7, the Bench had again before them the case in which Harriett Machin, of James-street, was summoned by Benjamin Bolt, inspector under the Food and Drugs Act, for exposing margarine for sale without a label attached, the margarine containing 90 per cent. of fat foreign to butter. The case was adjourned from last week, as defendant then stated she had a warranty from her wholesale grocer, who had given her £2 to pay the fine.—Mr. Harvey, of 60, Nursery-road, Aston, wholesale grocer, now attended, and stated he simply lent defendant the £2, as she was an old customer in poor circumstance. He had a warranty himself from the firm he dealt with.—Mrs. Machin again swore that he gave her the money and did not lend it, and the Bench said Mr. Harvey's tale did not appear at all probable. They fined defendant £5, and 15s. 6d. costs, pointing out that she could recover the money from Mr. Harvey, and he in his turn could recover from the firm he bought the margarine from, if he had a guarantee.—Mr. Harvey paid the fine.

At Brentford, on June 8, George Tarrant, buttermaker, of High-street, Brentford, was fined at the Petty Sessions £40 on two summonses for selling "butter" adulterated with 40 per cent. of foreign fat. At the same court, Edward Rouse, of Hounslow-heath, for a similar offence was fined £20.

GROCCERS AND GOLDEN SYRUP ADULTERATION.

At Wednesbury Police Court, on June 6th, before Mr. Neville (stipendiary magistrate), Walter Garrett, grocer, Dudley-street, Wednesbury, was summoned by Mr. Van Tromp for selling golden syrup adulterated with 85 per cent. of glucose.—Mr. Van Tromp pointed out that golden syrup was supposed to be a bi-product of cane sugar, and glucose was the sugar got from the starch by the action of acid.—In reply to Mr. James Clark (West Bromwich), who defended, Mr. Van Tromp said he was not aware that the light golden syrup had been on the market for some years. It was possible that glucose was used for the purpose of preventing golden syrup crystallising, but it certainly could not be necessary for 85 per cent. to be used for that purpose.—Mr. Jones, county analyst, gave evidence as to adulteration, and, in reply to Mr. Clark, said that glucose was not injurious. At the same time he always understood golden syrup to mean "golden treacle."—The Stipendiary said that was what he understood when he

was a lad (laughter).—Mr. Clark said he could not withstand the evidence of the prosecution. At the same time he would point out to his Worship that the case was the first of the kind in the district, and he hoped a lenient view would be taken of it.—A fine of 20s. and the costs was imposed.

HARRY HAYNES, and Richard Grainger, grocers, Holyhead-road, were summoned for like offences. In Grainger's case the adulteration was 56 per cent., and Haynes's 18 per cent. The defence was that the article was in the same condition as it was when received from the wholesale dealers, and that the defendants acted in entire ignorance. The Stipendiary said the defendants had their remedy against the wholesale dealers. Each of these defendants was fined 10s. and the costs.

EDWIN JONES, grocer, of Milton House, New Swindon, was summoned at Swindon on June 8th, at the instance of the Wilts County Council for selling a tin of golden syrup which was not of the nature, quality, and substance demanded.—Mr. H. Bevir, for the prosecution, said the certificate of the Public Analyst showed that the compound contained not more than 40 per cent. of syrup purified from sugar and at least 60 per cent. of glucose syrup, or 40 per cent. more than was necessary. The glucose was not injurious to health. The brand was the "Crescent" brand, and was sold at 3d. per lb.—Mr. Jones, in defence, called attention to the fact that the glucose was not injurious to health, and said it was introduced in order to prevent crystallisation. Traders were anxious to sell pure food, and he suggested that the law should be amended in order to make the packers liable.—The Bench decided to hear other cases before giving their decision.

HENRY ACKLINE, grocer, of Fleet-street, New Swindon, was summoned for a similar offence.—Mr. Bevir said the syrup was imported from Germany; and the proportion of glucose was 60 per cent.—Mr. Withy, for the defence, explained that Mr. Ackling ordered "finest golden syrup," and the invoice was worded to that effect.

JAMES THOMAS GREGORY, grocer, of Ashton Keynes, was similarly summoned.—The syrup in this case was an American brand, and the proportion of glucose was 70 per cent.

ARTHUR DAVIS WILLIAMS, grocer, of Bridge-street, New Swindon, was also summoned for a like breach of the law.—Mr. Bevir said that in fairness to Mr. Williams he wished to state that the tin bore the words "Finest quality made from pure cane." As a matter of fact the syrup contained less than 30 per cent. of cane sugar. Mr. Williams told the magistrates he bought and sold the article as pure golden syrup.

The Bench took into consideration the arguments for the defence, but inasmuch as their duty was to protect the public, they imposed a fine of 40s. in each case, to include costs.

ALFRED MAYBERY, Frank Maybery, and Arnold Maybery, trading as Gibbons and Co., of Bristol, were summoned for applying a false trade description to 20 dozen tins of golden syrup delivered to Messrs. A. D. Williams and Co., of Swindon, during the month of April, 1898.—Mr. Bevir appeared for the prosecution; Mr. R. E. C. Balsdon (from the office of Mr. Fairfax Spofforth, of Bristol), defended.—Mr. Balsdon raised a preliminary objection, that the summons should have been taken under the Food and Drugs Act, 1875, and not, as was the case, under the Merchandise Marks Act.—Mr. Bevir replied, and Mr. Balsdon offered no objection to the case being heard subject to his point being noted.—Addressing the Bench for the prosecution, Mr. Bevir said the County Council had felt justified in bringing a wholesale house into Court. The syrup in question, which was bought by Mr. Williams, was described on the label as being of the finest quality, and produced from pure cane, but as a matter of fact it contained only 39 per cent. of cane sugar, as against 70 per cent. of glucose.—Mr. Sam Smith, inspector under the Foods and Drugs Act, gave evidence of purchase.—Arthur

Davis Williams stated that he purchased the syrup from defendants in April, 1898, and sold it in the ordinary course of business.—Alfred Thornton, assistant to Mr. Smith, said he purchased some additional tins of the syrup from Mr. Williams last month, and sent them to Dr. Dyer.—Dr. Bernard Dyer, public analyst for Wilts, spoke to examining a sample of golden syrup which he received in February. At least 70 per cent. was glucose syrup, which was derived from maize starch; and there was only 30 per cent. of pure syrup. About 15 per cent. of glucose was sufficient for the purpose of preventing crystallisation; 20 per cent. was ample. As a matter of fact, golden syrup could be produced without glucose, and then not be open to the danger of crystallisation.—Cross-examined: Glucose was cheaper, but was not injurious to health. He was not aware that cane sugar and glucose combined were dearer than pure sugar.—The defendant Alfred Maybery said his firm entered into a contract for the delivery of the syrup to their warehouse, whence they despatched it to their customers.—John William Hall, in defendant's employ, also gave evidence.—Mr. Balsdon said defendants took no part in the manufacture of the syrup. They purchased it from an outside individual, and they only judged of the quality of the article by its appearance. They believed they were buying a genuine article, and the only portion of the label for which they were responsible was the name of the brand, "Ambrosia," and the initials "G. & Co." They entered into a contract to pack the sprup in tins and affix the labels. Defendants might have been lax in not having an analysis taken, but they bought the syrup in good faith and sold it in the same way. There was no representation on the label that the syrup was composed entirely of pure cane sugar; the description was "Made of pure cane sugar" and there was no pretence on the part of the prosecution that pure cane sugar was entirely absent.—Mr. Bevir: I am prepared to give the percentage.—Mr. Balsdon: Ten, I think.—Mr. Bevir: Six.—After consulting with his brother magistrates, the Chairman said that subject to the point of law the magistrates were unanimous in convicting. Their decision would be given a fortnight hence.

At Trowbridge, on June 7th, two grocers, Frank Daly and H. J. Witts were summoned for selling golden syrup not of the nature, substance, and quality demanded. In each instance the syrup was adulterated with glucose, 50 per cent. being included in Daly's and 70 per cent. in Witts's sample. On Daly's sample there was a label stating it was so adulterated, but there was no intimation to this effect on that sold by Witts, though his wife and a boy said the purchaser was told it was not pure. The case against Daly was dismissed, and Witts was fined 12s. including costs.

WATER AT SPIRIT PRICE.

At Swindon, on June 8th, Frederick William Dack, of the Grapes Inn, Cambria Place, New Swindon, was summoned for selling Irish whiskey not of the nature, quality, and substance demanded. Mr. Withy was for the defence.—Mr. Bevir, in opening, said defendant displayed a notice to the effect that "All spirits sold at this establishment are diluted," and the Bench would have to consider as to the meaning of these words. A pint of whiskey was bought in this case for 2s. 4d., and the question was whether for that sum the purchaser ought not to reasonably expect an article of good alcoholic strength.—Mr. Smith said he purchased some whiskey at defendant's house, and produced Dr. Bernard Dyer's certificate. This showed that the spirit was 25 degrees under proof, or 4 degrees below the legal standard of 25 degrees. While he was at the inn, Mr. Dack drew his attention to the notice.—Cross-examined: He agreed that this was not a bad case. A sample of gin which he took was genuine. He thought that 18s. 8d. per gallon was not an unfair price to charge

for the whiskey.—Re-examined: He had bought genuine whiskey at 2s. 6d. per pint.—Mr. Withy pointed out that defendant had not charged an unfair price for the whiskey. The question was whether defendant had put into or taken out from his notice two or three words bearing a particular signification. The County Council did not exist to enforce the laws of grammar, and business men would readily have gathered from the notice that they were not going to get "statutory whiskey."—The Bench considered that the spirits were not sold to the prejudice of the purchaser, and dismissed the case.

At Grimsby, on June 8th, Bryan W. Bullivant, landlord of the Cross Keys Hotel, Cleethorpes, was charged with retailing adulterated whiskey on the 15th May, to which his son, who appeared in his stead, pleaded guilty.—Supt. Stennett produced a certificate of analysis, which showed the whiskey to contain 71.4 of proof whiskey, and 28.6 of water, which meant that the spirit had been adulterated to the extent of 3.6. The analyst, said the superintendent, never recommended prosecution where the adulteration was only one per cent.—Defendant's son said it was bought in the usual way and he could not account for the adulteration.—A fine of £2 and 5s. 6d. costs was inflicted.

OLIVE OIL ADULTERATION.

At Birmingham, on June 9th, Albert Tibbetts, druggist, 165, Summer Lane, was summoned for selling camphorated oil which contained 78 per cent. of foreign oil, and was fined 60s. and costs. Similar penalties for similar offences were imposed upon Joseph Davis, chemist, Summer Lane; William Thompson, chemist, 133, Summer Lane; and Hubert Walker, drysalter, 88, Saltley Road.

ADULTERATED MILK OF SULPHUR.

At Shipston-on-Stour, T. W. Coleman, Ltd., of Banbury, grocers, were summoned for selling milk of sulphur adulterated to the extent of 44.5 with sulphate of lime. Defendant pleaded guilty. Mr. F. G. Bennett, the inspector of weights and measures, proved purchasing the sample at defendant's shop at Little Compton, and sending the same to the county analyst, who had reported with the result above stated. Mr. Bennett said the sulphate of lime was the same as plaster of Paris and was injurious. Defendant said they sold the article just as they received it from the wholesale house. They thought it was all right. Mr. Pratt said what the defendant sold always was known as milk of sulphur until recent years, but now it was sold under another name. The real milk of sulphur was different to what defendant had sold. Fined 10s. and 13s. costs.

DEMERARA SUGAR AND COFFEE ADULTERATION.

At Birmingham, on June 9th, George Burrow, grocer, 155, High Street, Deritend, was summoned for selling dyed crystals as Demerara sugar, and as coffee, a mixture which contained 55 per cent. of chicory. Police-constable Jones of the Food and Drugs Department, sent a woman to defendant's shop, and she asked for Demerara sugar and coffee. For the first she was given dyed sugar, and for the latter a mixture of the character stated. Mr. Lane, who defended, called his client, and produced an invoice to prove that what the defendant ordered from the wholesale house was Demerara sugar. Mr. Carter (clerk), however, commented on the vagueness of the invoice, which he said, did not properly describe any of the articles in it. As to the coffee, evidence was called to the effect that the assistant slipped a label, stating that what he sold was a mixture, beneath the string of the parcel, but it got lost.

The assistant said he was thinking more about his dinner than the label, and so did not gum it properly. The Clerk: But she asked for coffee, and you think it is sufficient to sell her a mixture and then stick on a label. Witness said people could not expect to get coffee for 1s. Mr. Ryland: Then why don't you tell the purchaser that? In the case of the sugar the Bench decided to impose a fine of 20s. and costs; in the other case £5 and costs—£7 18s. in all.

At Upton-on-Severn, on June 9th, Mary Maslin, of Upton-on-Severn, was charged with selling $\frac{1}{2}$ lb. of coffee which contained 50 per cent. of chicory.—Sarah Jane Cook said she was instructed by Inspector Beal to purchase $\frac{1}{2}$ lb. of coffee from Mrs. Maslin. She asked for $\frac{1}{2}$ lb. of coffee, and paid 7d. for it.—Inspector Beal said on the 21st of April he instructed the last witness to purchase $\frac{1}{2}$ lb. of coffee. It was given to him, and he went to Mrs. Maslin and told her it was purchased for analysis. He divided it; it contained 50 per cent. of chicory.—Ordered to pay the costs and cautioned.

MILK ADULTERATION.

At Hertford, on June 3rd, Henry Bullen, of Hertford, was summoned at the instance of Mr. Thomas Johnson, inspector under the Food and Drugs Act, for having in his possession a certain quantity of milk intended for sale, on May 9th, from which 27 per cent. of the natural fat had been extracted. Defendant pleaded not guilty. The prosecutor said he met the defendant at 7.45 on the morning in question, at Hertford Heath, selling milk. He asked him for a pint of new milk, with which he supplied him; and then he informed defendant in the customary way that he required it for analysis, and divided it into three parts, one for the defendant, one for the analyst, A. E. Ekins, St. Albans, and a third for himself. The defendant kept three cows, and according to his own statement, served milk to a large number of people who fed babies with it. Defendant: He is a story-teller. I never put anything in. Mr. Stride: No, he alleges you took something out. Defendant: No, I didn't take anything out. The Bench inflicted a fine of £1.

At North London, on June 12th, John Rowe, dairyman, of Victoria Park Road, was summoned before Mr. E. S. Fordham, yesterday, for causing to be sold an article as pure milk, to which the Public Analyst certified that 42 per cent. of water had been added. Mr. H. T. Tiddeman prosecuted for the Hackney Vestry; and Mr. C. V. Young defended. An inspector in the employ of the Vestry proved purchasing the sample in question from a lad who had a milk perambulator, with the name "J. Rowe" upon it. The defence was a total denial that the sample had anything to do with the man now before the Court, who handed in his card as "W. J. Rowe." He contended that, though he used the initials W. J., his name was plain William, and not John, and the reason why he had adopted the "J." was because he had a brother Walter in the same trade. Two witnesses were called by the prosecution, who said the Mr. Rowe now before the Court, was the man who supplied milk to them, and from whose boy (John Bray) the sample was taken. The defendant said he did not know John Bray, notwithstanding that the boy said John Rowe was his uncle. He produced a milk can bearing the name "W. Rowe" only. Mr. Fordham in deciding the case, said that, without the slightest reflection on Mr. C. V. Young, who was only following his instructions, he had come to the conclusion that the milk in question was sold to the Inspector by a boy in the employ of the defendant. He convicted the Defendant, and fined him £5, with £3 3s. costs. He also directed the police to make it their business to try and get the birth certificate of the defendant, and if they found he was "William John" to see whether they should not institute proceedings against him for perjury.

THE ADULTERATION OF TEA.

IN the House of Commons on June 8th, Sir F. Flannery asked the Chancellor of the Exchequer if his attention had been called to a statement in the Press that a quarter of the caper teas and half of the dust teas now imported should be confiscated under the Food and Drugs Act of 1875, by reason of their containing 20 per cent. of earthy matter and sand; whether he would explain the nature of the precautions taken by the Customs Department in London for the detection of such adulteration; and whether the number of samples analysed could be increased with advantage.

The Chancellor of the Exchequer.—My attention has been called to this matter. The Board of Customs have, in view of representations made to them by certain firms and of statements in the Press, ordered a full enquiry to be made. It is not easy, within the limits of an answer to a question, to explain the precautions taken by the Board for the detection of the adulteration of tea, but I shall be happy, if the hon. member wishes it, to supply him with particulars. The Board of Customs, as at present advised, do not consider that there is any need for altering the existing regulations; but if, as a result of the investigation now in progress, it should appear advisable to make such alterations, or to increase the number of tea inspectors, the necessary steps will be taken at once. Meantime, a circular has been issued to the tea inspectors, asking them to administer the existing regulations with special care.

In the House of Commons on June 9th, Mr. Carew asked the Financial Secretary to the Treasury whether he was aware that large importations of tea rejected by the Hamburg and New York Customs had recently been passed by the English Customs, and sold in London, although containing up to 20 per cent. of clay and sand, and unfit for human consumption; and whether, in view of the fact that the price of common teas, of which the poor were the largest consumers, had advanced 50 per cent., the Government would insist on a more rigid inspection of all future importations to prevent a repetition of the fraud.

Mr. Hanbury.—The Board of Customs have no means of testing the accuracy of the statement in the first paragraph. As was stated yesterday by my right hon. friend the Chancellor of the Exchequer, in reply to a similar question, a full inquiry is being made, and if it should appear advisable to alter the existing regulations, or to increase the number of tea inspectors, the necessary steps will be taken at once. Meantime a circular has been issued to the tea inspectors directing them to administer the existing regulations with special care.

In reference to the enormous amount of adulterated tea which is being sold in England, we learn that many authorities expect an increase in the imports of this inferior article unless the Government consents to devise a better system of inspection. Some teas now on sale contain it is said 10 to 20 per cent. of sand or earthy matter. The Indian Tea Association in Calcutta contends that if the duty were removed there would be less danger of adulteration, but they do not promise entire relief, or even any relief. At present the Association is thinking out a scheme for organising the British shareholders, who represent a capital of £20,000,000 invested in the Indian tea industry, in order that the strongest possible pressure may be brought to bear upon successive Governments in the matter of abolishing the duty. But the one thing needful is obviously better inspection because in the face of the Somerset House action it is absurd to look for more prosecutions under the Food and Drugs Act.

ANTISEPTICS IN FOOD IN AMERICA.

THIS important question (to which we have already referred) is attracting attention, and some alarming statements were recently made by Professor Mitchell, analytical chemist to the Chicago Committee of Investigation, as to the use of "freezine," laktone, etc.

"The use of antiseptics as preservatives," said Professor

Mitchell, "has become alarmingly great. They are used as colouring and to stop the development of germs in dairy products; also in chopped meats, oysters, fish, hams, and possibly corned beef."

Professor Mitchell made the sworn statement that nearly every butcher in Illinois used preserving liquids on scraps of meat which they laid aside for the manufacture of Hamburg steak and other alleged delicacies.

The chemist first told of his test of a liquid known as "freezine," which has been used extensively by farmers to keep milk and butter.

"This 'freezine' I have found to be nothing less than almost pure formic aldehyde," said the expert. "This is a chemical that acts disastrously upon the tissue of the stomach, and I can only surmise the results when milk diluted with it is used constantly by a family."

The Professor went on to tell of his experiments with a fluid sold extensively to butchers for the purpose of making their Hamburg steaks keep up a healthy appearance."

"This liquid contains in great percentage what is known as sulphite of soda with some colouring matter," he continued. "It is styled an antiseptic, and in certain respects is. It must be borne in mind, however, that where fermentation and waste are arrested the digestive properties are consequently destroyed."

THE DERBYSHIRE ANALYST ON THE TEN PER CENT. BUTTER FAT.

At a Meeting of the Derbyshire Dairy Farmers' Association, Mr. J. White (the County Analyst) offered some observations from an analyst's point of view. He explained the difference between margarine which was coloured and that which was not coloured, and went on to say that the promoters of the Bill referred to, instead of boldly saying that margarine should be sold without colouring matter, had endeavoured to go half way towards that by trying to suppress the sale of mixtures containing a considerable portion of butter. In the Bill they proposed that it should be unlawful to manufacture, sell, expose for sale, or import, any margarine which contained more than ten per cent. of butter fat. That was very well as far as went, but it was almost meaningless and of no value (Hear, hear.) If such a clause became a part of the Bill, the first contention raised upon the vendor being taken into the court upon a breach of the law would say this. Did the 10 per cent. mentioned mean 10 per cent. of the actual fat or 10 per cent. upon the weight? This was the vital question which ought to be considered in the wording of an important Bill like this. It was almost impossible to tell to 10 per cent. of the proportion of butter in any mixture, and to fix such a standard was quite ridiculous. Our readers will see that Mr. White endorses our view which Mr. Hehner objected to in our last issue.

COLD STORAGE OF FRUIT.

THE Technical Educational Committee of the Kent County Council has just received a report by Mr. W. P. Wright, F.R.H.S., superintendent of horticulture, upon the results of a series of experiments in the cold storage of fruit. The cold chambers used were fitted with brine walls, and cooled to any desired temperature by means of carbonic anhydride refrigerating machines, the fruit being placed upon tiers of galvanised wire shelves under three different conditions—(1) exposed on shelves, (2) enveloped in grease-proof paper, (3) surrounded or covered by cotton wool. It was found that strawberries can be kept for three weeks at least in a temperature of 30 degrees, but it is necessary to surround the fruit with cotton wool, or, in the case of fruit in sieves, to place a pad of that material over the top. If this precaution is not taken the fruit, though sound, becomes dull and loses the fresh, inviting appearance which is so important when it is offered for sale. Black currants showed a tendency to shrivel after 10 days' storage, but plumped and freshened in a marked degree when again exposed to ordinary conditions for a few

hours. This was especially the case with those stored in market sieves and covered with a pad of cotton wool. After a fortnight's storage at 30 deg. the temperature was raised to 32 deg., and this seemed to give the best results. Red currants remained perfectly sound for six weeks, and when exposed for 16 hours to a normal temperature maintained their freshness. The ideal conditions seemed to be—(1) a temperature of 32 deg to 36 deg.; (2) a covering of paper to prevent contact with the currents of air. Cherries covered with wool and stored at 30 deg. were, at the end of four weeks, not only sound, sweet, and juicy, but fresh and clear. After that the fruit began to wrinkle. The fruits above referred to should be placed in store in advance of dead-ripeness, and must not have been pecked by birds or otherwise injured. Greengages were kept for 10 weeks in excellent market condition at 33 deg. Victoria plums remained sound about nine weeks, but with that exception the cooking varieties did not lend themselves well to cold storage. Of apples, most of the leading early dessert sorts were tried, and with one or two exceptions (Cardinal, Duchess of Oldenburg, and early Julyan) they kept until the end of January. A temperature of 36 deg. was found to be the most generally suitable. This fruit needs no covering. Pears can be kept from three to four months at least, but care must be taken to avoid bruising, and the fruit should be stored just before it is fully ripe, at 36 deg. or a lower temperature. Coverings are not necessary. Mr. Wright states that at the middle of March he visited the cold store and found sound fruit of the following kinds:—Apples: Cox's Orange Pippin, Colonel Vaughan, Duchess of Gloucester, Worcester Pearmain, Chelmsford Wonders (all early market varieties), Bismarck, Blenheim Orange, and Ecklinville Seedling. Pears: Conference, Doyenné Boussoch, Doyenné du Comice, and Pit-maston Duchess. Most of these are, in the ordinary course of things, over by Christmas at the latest. Tomatoes kept sound for six weeks at a temperature of 36 deg., but the experiment was not a complete success owing to slight surface discolouration at the point of attachment to the leaf stalk, which had decayed. Grapes kept best at 32 deg. and covered with grease proof paper. They were cut at the end of August, and specimens of Muscat of Alexandria commenced to "go off" at the beginning of November. Black Hamburgs were good a little longer, but lost their fresh, inviting appearance. Trials with peaches were rather conflicting, but fruit gathered when not quite ripe, was kept until December 2nd. Royal George kept well in 32 deg. for two months. In conclusion his report, Mr. Wright observes that people do not quickly weary of high-class fruit, and a longer season than at present exists could be secured for many kinds if the best quality were ensured. Moreover, there are periods within the season of several perishable fruits, black currants for instance, when ability to hold the pickings over, if only for a few days, would mean securing an enhanced price. A well-known market expert declares:—"If there were adequate cold storage, one-third more English fruit could be sold at 25 per cent. more money." Mr. Wright is of opinion that on a very small scale cold storage would not pay, although it would on a large one. Its future probably lies in instituting it in large fruit districts. It must be remembered that one engine will run several chambers, and the poultry dealer, the fishmonger, the dairyman, and the butcher could have his section as well as the fruit grower. It would not matter in the least how many different classes of perishable food products were subjected to cold storage at the same time, and from the same medium, as fruit, so long as they were not in the same compartment, for any intermingling of air from other compartments can be entirely avoided.

COPPER SULPHATE FOR CHARLOCK.

AN experiment which is creating an unusually large amount of interest, is being made during the present season. It has recently been discovered that by spraying charlock on wild mustard with a solution of sulphate of

iron or sulphate of copper, they may be destroyed, while the corn among which they are growing, as well as the seeds, are uninjured. The Agricultural Department of the Yorkshire College, on behalf of the East and West Ridings Joint Agricultural Council, are at present engaged in giving demonstrations of this new method of eradicating this well known pest. Machines of two different types are being used in the demonstrations, the object being to show what can be done in order that farmers may ascertain the value of the system and the relative value of the machines before purchasing. Up to the present time, about twelve demonstrations have been given in different parts of the Ridings, each demonstration covering from five to fifteen acres of land. The experiment is one that requires to be carried out with caution, and as yet the exact strength and quantities have not been determined with accuracy. Later in the season a report on the work will be issued to farmers, but in the meantime, those having fields badly infested with charlock, and who wish to purchase a machine, should communicate with the head of the Agricultural Department of the Yorkshire College, Leeds, from whom they will be able to obtain particulars that will enable them to do the work with safety to the crop. Arrangements may be made whereby demonstrations may be given to farmers' clubs on certain conditions, particulars of which may be obtained from Professor Campbell, Yorkshire College, Leeds.

THE CONCAVE BOTTOMED WINE BOTTLE.

WHERE is the man who hasn't at some time or another poured from a bottle a few glasses of the sparkling and then suddenly discovered that the bottle was empty? Who has not then looked at that great gob of glass punched up from the bottom to the middle of the bottle and wondered why and wherefore?

Accident has discovered a great many things that research has failed to find. The concave bottom of the wine bottle is an example. It does not appear to be much of a discovery, but if the total saving to some, and the total cost to others be counted, it is a valuable, and, at the same time, an expensive arrangement.

The Yankee invented wooden nutmegs and the Frenchman artificial birds' eggs, but a Dutchman first thought of that robber, the convex-bottom wine bottle.

A certain Dutchman, having gone as far as he dared in the reduction of the strength and quality of the liquor he dealt in, cast about in his mind how he might succeed in making the less appear the greater. But he could not hit upon any satisfactory dodge. This disgusted him, he felt ashamed of his lack of business instinct, and began seriously to meditate selling the good-will of his business and retiring.

This gentleman was in the habit of importing wine from Spain. This wine came mostly in hogshead, but now and again his correspondent would send him small parcels in the original skins in which the wine comes, even to this day, on mule-back from the interior of Spain to the seaports.

One day Mynheer saw one of these skins, which he knew was only half full, lying on the floor of his warehouse seemingly quite full.

Being in his way a man of talent, he examined the skin with care before he moved it. He lifted up one side, and it at once became flabby. The skin was only half full, but it had been reposing on an inverted bowl; this had pushed up the middle of the skin, and allowed the wine to press the rest of the skin down on the boards, while the visible part of the skin was correspondingly distended.

The Dutchman took the hint, and had bottles made with the deceptive concave bottoms, which we now know so well. The idea caught on for at the finish only the wretched consumer had to pay, so every hand the bottles passed through before coming to the retail customer made a bit by the change.

The unorganized mass of the public realized soon enough how deceptive were the bottles that seemed as large as ever they were, but they had to put up with it, for in those times the public had, much more even than nowadays, to take what they could get and be thankful, while such is the conservatism of mankind, that if they were offered flat bottomed champagne bottles now, they would probably refuse them, and imagine they were being done.—*Liquor Trades Review*.

ADULTERATION IN BIRMINGHAM.

DR. ALFRED HILL, M.O.H., and Public Analyst, reports to the Health Committee, during the year 1898, I received for analysis 1,146 samples of food, drink and drugs. Two samples were submitted by Mr. Parker, Inspector of Nuisances, and the remainder by Mr. H. I. Jones, the Food and Drug Inspector under the Acts.

Last year there was an increase in the number of samples of food and drink received, but owing to the issue of a new British Pharmacopœia, a decrease in the number of samples of drugs.

The 1,146 samples analysed equal one sample for every 445 of the population of Birmingham. The average of the five years 1892-6, was one per 458 persons.

In 1897, eleven per cent. of the samples were adulterated with preservatives only, and fourteen per cent. were adulterated in other ways; last year the figures were nine and ten per cent. respectively, showing an improvement under both headings.

The Report of the Local Government Board for 1897, shows that twelve per cent. of the samples examined in London, and nine per cent. of the total samples examined in England and Wales, were reported to be adulterated; the figures, however, are not exactly comparable, as in that Report samples taken under the Margarine Act appear to be counted as genuine, and no statement is made of the number of articles condemned because of the presence of preservatives.

The large increase in the percentage of adulteration with preservatives only in 1896 was due to the commencement in that year of the systematic examination of all samples of butter and milk for preservatives. Last year was rather better than the previous two years in this respect.

In only one year has the percentage of adulteration other than by preservatives been lower than ten per cent.—the figure for 1893—and that was in 1886, when eight per cent. of the samples were thus adulterated. The average for 1892-6 was eleven per cent.

Rather fewer prosecutions were undertaken last year than in the previous two years; but, in spite of this fact, the amount of the fines paid by adulterators was larger than in any previous year.

Out of 449 samples, ninety-one, or twenty per cent., were certified to be adulterated. Twenty-eight samples were adulterated with water, sixteen were deprived of part of their fat, and seven others contained both too much water and too little fat, the total being fifty-one samples, or eleven per cent. adulterated in these ways. Thirteen samples were condemned because of the presence of boric acid, and twenty-seven others contained formic aldehyde, forty samples, or nine per cent., being adulterated with preservatives only.

The number of samples of milk analysed was equivalent to one sample for every 1,137 persons living in Birmingham.

The average composition of the 443 samples of genuine and adulterated samples sold as "milk" was 12.4 per cent. of solid matter, of which 3.9 per cent. was fat; this is rather higher than in 1897, when the corresponding figures were 12.2 per cent. of total solids and 3.7 per cent. of fat.

The lowest sample of milk was one which contained 7.2 per cent. of total solids, being adulterated with 43 per cent. of water, a shocking example of what a milk-man

can do at times. The best sample contained 18·7 per cent. Twenty-five per cent. of the samples contained less than 12 per cent. of total solids, and were either of low quality or adulterated; seventy-one per cent. were of good quality, having 12·14 per cent.

Boric acid was found to be present in sixteen samples of milk in quantities varying from three to one hundred and thirty grains per gallon. Four of the samples were of low quality, two contained added water, three contained formic aldehyde, one of them being also skimmed.

The vendor of the sample containing one hundred and thirty grains of boric acid per gallon was prosecuted. At the hearing of the case my evidence was supported by that of Dr. Carter, Physician to the Queen's Hospital. He stated that in his practice he had found the continued use of boric acid undesirable, as it produced symptoms of indigestion, and occasionally affected the heart and skin. He had made experiments which showed that moderate doses retarded the action of the saliva. Boric acid was a substance foreign both to the body and to milk. He considered such a milk prejudicial to health, and that in a child it might set up irritation leading to fatal results. Dr. Bond and Dr. Hake were called for the defence; they both admitted that the quantity of boric acid was unnecessarily large. The farmer who supplied the milk stated in evidence that he had added a *solid* preservative to the churn of milk, and it appeared probable that, owing to the slow solubility of boric acid, the milk supplied to the Inspector by the vendor contained more than its share of preservative. The Magistrates considered the amount of boric acid present to be excessive, and fined the defendant 2s. 6d. (!) and costs. In a case like this, where four experts agreed that the quantity used was unnecessarily large, and the magistrates stated their opinion that it was excessive, one is astonished that such a paltry fine should have been inflicted. In your last prosecution for boric acid in milk, 75 grains per gallon were present, and the fine was 5s. and costs; in this case the quantity was considerably more, and yet the fine was only 2s. 6d. I may point out that the vendor was not summoned under Section 3 of the Sale of Foods and Drugs Act for selling an article injurious to health, but under Section 6, so that the only question the Magistrates had to decide was whether milk containing boric acid was "of the nature, substance and quality of the article demanded." Of course it is not, and milk containing preservatives should not be sold as "milk," but as "borated milk" or "milk preserved with formic aldehyde," as the case may be, or with some description which states exactly what it is.

Formic aldehyde was detected in thirty-two samples of milk, three samples also contained boric acid, and five were either of low quality or deficient in fat. At the request of your Committee I made a special report on the subject of formic aldehyde, of which the following forms part.

"According to Mr. Stokes, Public Analyst for Paddington, etc., it is commonly found in strong doses in milk from Normandy, and it is said to have been tried by London dairymen, but without much success."

"From the experiments of F. D. Simons, it appears that one effect of formic aldehyde is to retard digestion, and Wiegler and Merkel found that it rendered milk less digestible by making the casein less soluble. Even a very weak solution containing one part of "formalin" in 2,000 (equivalent in about one part of formic aldehyde in 5,000) was found to harden fish to such an extent as to make it unsaleable, and the attempt to preserve fish by this means had to be abandoned."

"From these observations it will be seen that formic aldehyde appears to have a very marked action on certain food stuffs, and is therefore likely to lead to indigestion and its attendant ills. In addition to this, it is most objectionable to add a drug of any kind to common articles of food. It is almost objectionable on the ground that by the addition of a preservative, stale milk may be palmed off on the customer as fresh: and on all these

grounds I strongly object to formic aldehyde as a food preservative."

"There has been a prosecution in Liverpool, when it was contended that milk did not need any preservative, that the use of formic aldehyde enabled a dealer to sell stale milk as fresh, and obviated the necessity of cleanliness of the dairy. It also made the milk indigestible and had an irritant action on the mucous membranes. Professor Boyce, of the University College, and Mr. Williams, the Public Analyst, asserted that formalin in milk was quite unnecessary and most objectionable. Mr. Davies, analytical chemist, and Dr. Barrow, were called for the defence and expressed the opinion that the amount of formalin said to have been used would not be injurious to health. The Stipendiary Magistrate expressed himself, however, as on the side of the cow against the chemist, and inflicted a fine of £5 and costs. Notice of appeal was given but was subsequently withdrawn."

Of 396 samples of butter examined, twenty-four, or seven per. cent., were adulterated with foreign fat; in twenty cases boric acid was also present. Sixty-four of the remaining 302, or twenty-one per. cent., were adulterated with boric acid. In one case (No. 299), seventy grains per pound was present and the vendor was prosecuted and fined. At the hearing of the case I gave evidence that boric acid was a drug having powerful physiological effects, and that in my opinion the regular continued use of the butter was liable to have an injurious effect on either the skin, heart, kidneys, or digestive system. I pointed out that boric acid differed from salt in having very little taste, and the consumer therefore would not be able to tell if an excess of it was present; that a microscopical examination of the butter showed numerous crystals of boric acid, these crystals being in the solid state were useless for the preservation of the butter, although exerting the same physiological effect when swallowed as if they were in solution. I stated that I had found the drug in cream, clotted cream, bacon, pork-pie, sausage, polony, ham and tongue, and pickled tongue, and that if its use were permitted there was a great danger that a considerable and dangerous amount of it might be daily taken without the knowledge of the consumer. The addition of preservatives to butter is unnecessary, as it will keep good for several weeks, and if deposited in a refrigerator it will do so indefinitely. Dr. A. P. Luff, of the Home Office, also gave evidence. He stated that five cases were recorded in which the surgical use of boric acid had produced death; he considered that if half a pound of the butter were regularly consumed per week, the five grains per day of boric acid thus taken would depress the heart, irritate the kidneys, and produce disorders of the alimentary canal. He would advise that the use of boric acid in food should be prohibited. Dr. C. T. Vachell, Physician to the Cardiff Infirmary, gave evidence that in his practice he had found that regular doses of five or ten grains of boric acid given to adults had produced eczema and necessitated the discontinuance of the remedy for a time. He considered that it should not be used in food at all. The Magistrates fined the defendant £1 and £5 costs in addition to the Court costs of 16s. 6d.

In another case (No. 521) the quantity of boric acid present was seventy-seven grains per pound. The vendor was fined £2 and costs.

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REFRIGERATION has made vast strides in this country of late. Cold stores are being erected in every district, and thousands of people are now interested, directly or indirectly, in the subject. In order that "COLD STORAGE," the monthly journal edited by Mr. R. M. Leonard, and solely devoted to the refrigerating industry in all its branches, may reach a still larger public than at present, it has been decided to reduce the price of the paper to 2d., retaining at the same time all its present features. The Publishing Offices are at 19, Ludgate Hill, London, E.C.

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Food and Sanitation.

SATURDAY, JUNE 24, 1899.

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FULL WEIGHT IN TEA :

Lipton Convicted, but why not Imprisoned ?

THE proceedings against Lipton, Ltd., at Worship Street, London, on June 15th, raised an important question.—Mr. Carson's defence that the practice of giving short weight in tea is universal is ridiculous nonsense. It

has been the practice of a shady trader here and there, but it has never been universal and the best firms have steadily condemned it. There was some justification for including the weight of the paper in selling sugar inasmuch as the paper cost more than the sugar, but with tea it is different and the game of selling about 1,930 lbs. of tea as a ton of 2,240 lbs. is a very paying one, and in the interests of honest trading it is well that action has been taken to suppress it.

At the Worship Street Police Court, on June 15th, before Mr. Cluer, three summonses taken out by Messrs. Brooke, Bond and Co., wholesale tea dealers, against Messrs. Lipton, Ltd., of City Road and other places, came on for hearing. The summonses were taken under Section 2 of the Merchandise Marks Act, and alleged that the defendants had sold tea under a false description, by including the weight of the packet in the weight of the tea. There were also two summonses taken out against the same firm by the London County Council, under the Weights and Measures Act, for using unstamped weights and weights not of the Board of Trade denomination. Mr. Seager Berry prosecuted for the London County Council, Mr. Horace Avory and Mr. Corrie Grant (instructed by Messrs. Radford and Frankland) prosecuted on behalf of Messrs. Brooke, Bond and Co.; while Mr. Carson and Mr. Charles Matthews represented Lipton, Ltd., under instructions from Mr. Charles Russell. The court was crowded. The summonses taken out by Messrs. Brooke, Bond and Co. were heard first.—Mr. Avory said he appeared with his friend, Mr. Corrie Grant, in support of the summons taken out by Messrs. Brooke, Bond and Co., wholesale tea dealers, of St. Dunstan's Hill, to decide whether the system adopted by the defendant company in selling tea "under a false description," as alleged was valid in law. There were three summonses taken out under the one Act, the Merchandise Marks Act, in respect of the 1 lb. of tea, $\frac{1}{4}$ lb., and 2 oz., in packets. The labels on the packets represented that the tea sold was 1 lb., $\frac{1}{4}$ lb., and 2 oz., whereas in reality the packets only weighed the amounts named when the paper wrappers were included in the weight. The lead paper or paper of any kind used as wrappers was weighed in with the tea, making the tea actually less in weight than the quantity represented by the company. Purchases had been made at most of the company's shops, and the results showed that the system was adopted deliberately by the company in all its branches. The prosecution therefore alleged that the trade description of the packets was false. The result of their system was that the company increased their profits by £16,000 or £17,000 per annum. The prosecutors, Brooke, Bond and Co., sold tea at full weight, and if they adopted the practice of Messrs. Lipton they would increase their profits by £11,000. What they alleged to be the false trade description was contained not only on the packets, but also on handbills.—William David Mercer, managing clerk to Messrs. Radford and Frankland, solicitors, Chancery Lane, stated that he bought packets of tea at the Old Street shop of Messrs. Lipton on May 26th. He asked

for 1 lb. of 1s. 4d. tea and got one of the 1 lb. packets. He bought also other packets, $\frac{1}{4}$ lb. and 2 oz. Afterwards he had them weighed. He took them to the Weights and Measures Office of the London County Council in Rosebery Avenue, where he found that the packets only weighed the represented weight, 1 lb., $\frac{1}{4}$ lb., and 2 oz. respectively. The papers were also weighed separately, with the tea turned out.—Mr. Carson cross-examined with a view to eliciting from the witness the fact that he got what he asked for—a 1 lb. packet of tea, a $\frac{1}{4}$ lb. packet, and a 2 oz. packet. The witness, however, contended that he asked for 1 lb. of tea, $\frac{1}{4}$ lb. of tea, and 2 oz. of tea respectively. Charles Bending, Inspector of Weights and Measures to the London County Council, said that the last witness brought to him, on May 26th, three packets of tea, 1 lb., $\frac{1}{4}$ lb., and 2 oz., with thirty-seven other packets, and in every case there was a deficiency of weight in tea. The tea in the 1 lb. packet weighed only 15 oz. 13 drams, in the 4 oz. packet 3 oz. 14 drams 16 grains, and in the 2 oz. packet 1 oz. 15 drams 3 grains.—Mr. Carson, for the defence, said that Messrs. Lipton had acted deliberately, and claimed the right to so act, and would go on in the practice until they were stopped. They were not charged with any fraud, but a rival trader, partly for the purpose of advertisement, and partly because he was a rival, had thought fit to raise the question on the facts raised in previous cases—a trader who had himself indulged in what was a universal practice in the tea trade. It was a definite and well-known custom. Messrs. Lipton had taken particular care to label the $\frac{1}{4}$ lb. packets of tea " $\frac{1}{4}$ lb. packet," and not " $\frac{1}{4}$ lb. of tea." Therefore there was no false trade description. Further than that, even if it were a false description, Messrs. Lipton had acted innocently. In 1892 when the case of Allwood against Harris was decided by Mr. Justice Matthew—the conviction and fine of 5s. being quashed—Messrs. Lipton at once consulted Sir Charles Russell, now the Lord Chief Justice, and got from him an interpretation of the law on their own position, showing that they were acting quite legally in selling their tea in packets as stated in the present case. Therefore, if it was not a full and proper trade description, Messrs. Lipton had acted innocently and could not be convicted.—Evidence tending to bear out counsel's contention was given by Mr. William Shaw Carmichael, secretary to the defendant company, and other witnesses.—In the end the Magistrates found the defendants, Messrs. Lipton, guilty of selling packets of tea under a false trade description, and fined them £10 and fifteen guineas cost.

Considering how enormous are the profits of selling paper at tea prices, about £24 per ton extra being thus filched from the public we cannot regard the fine as in any way adequate.

The Act gives imprisonment for four months with hard labour or a fine of £20.

There is something very curious about the way in which Lipton escapes punishment for false marking. It is only a few years since he was convicted in Ireland for false

marking bacon and hams, but the obliging Lord Lieutenant (Lord Houghton, now Earl of Crewe), quashed the conviction. By what means so extraordinary and wanton an outrage on justice came to pass remains to this day a mystery.

Again, not long ago at Birmingham we found this worthy gentleman convicted of selling sugar adulterated with lime. Truly, Knighthood selections are fearfully and wonderfully made.

SPURIOUS DEMERARA SUGAR.

At Farnham, Fred. George Hitchcock, grocer, etc., Shortfield Common, Frensham, was summoned for selling Sugar not of the quality demanded, to wit, Demerara, on May 16th.—Mr. E. Kempson defended, and pleaded not guilty.—Mr. F. Cliffe, Inspector to the Surrey County Council, said he asked for a pound of Demerara sugar, and was supplied with an article for which he paid 2d. Witness divided the sugar purchased. The certificate showed that the sample submitted to Dr. Stevenson, analyst, was not genuine Demerara, and he thought it pointed out that this sugar was dyed cane sugar which came from Mauritius was known in the trade as Demerara.—Mr. R. D. Kingham, of the firm of Messrs. Kingham & Sons, wholesale grocers, was called to prove that this sugar was Demerara.—Some argument ensued as to the admissibility of the evidence, and Mr. Cliffe formally objected.—Mr. Kingham said that this was cane sugar from the West Indies or kindred Islands, and said the sample left with the defendant was a cane sugar. All sugar was dyed: when it came from the cane it was nearly white, and had to be coloured. Mr. Kempson took legal objection to the analyst's certificate, as he had gone beyond a bare analysis of the sample submitted.—It was *ultra vires*, and beyond his function.—An employe of Messrs. Kingham's, said he sold defendant a quantity of sugar, of which the sample produced was a portion.—Acting on a suggestion from the Bench, Mr. Kempson applied for a sample to be sent to Somerset House for analysis, and the case was accordingly adjourned for a month.

GOLDEN SYRUP.

At Sunbury, on June 12, Thos. Tomlinson, of Stanley-road, Teddington, was summoned on the charge of selling to Walter Tyler, Inspector under the Food and Drugs Act, golden syrup which was not of the nature, substance and quality demanded.—Inspector Tyler said he bought a pound of golden syrup from defendant on the 15th April. When he afterwards told defendant that it was for the purpose of analysis, and offered to divide it defendant said it was not necessary. The analyst's certificate was that the sample contained sugar syrup 60 parts, and starch syrup 40 parts, whereas it should have been all sugar syrup. Mr. Tyler said he was satisfied that the defendant had been imposed upon. The syrup was in a jar bearing a label stating that it was manufactured at Swanley, Kent, but it was supplied to Tomlinson by Messrs. Bradbury, of Brentford. Upon calling on Messrs. Bradbury, who are wholesale dealers, Mr. Tyler was shown a similar jar, but this bore an additional label, put on by them, which showed that the article was not pure sugar syrup, but defendant denied that any such label was on the syrup supplied to him. Inspector Tyler said it was necessary in order to proceed against the responsible parties, that a conviction should be recorded in this case.—Defendant was accordingly convicted, and required to pay 18s. 6d. costs.

ADULTERATION IN FLINTSHIRE.

THE County Analyst (Mr. W. F. Lowe, Chester), in his report, said during the quarter ending March 31st,

39 samples had been submitted for analysis, and three had been found to be adulterated, or in proportion of $7\frac{3}{4}$ per cent. The articles examined consisted of 18 samples of milk, 13 of butter, 3 of bread, 2 of coffee, and one each of the following:—lard, tea, and tapioca. The adulterated articles were two samples of butter containing respectively 17 and 14 per cent. of foreign fat, and a sample of milk containing 6 per cent. of added water. Convictions were obtained for both the samples of butter. He had not heard the result as regarded the milk samples, but as a sample taken direct from the cows more than confirmed the adulteration certified to, he had little doubt that a conviction would be obtained in this case also. The samples of bread were all pure and of good quality. It would, perhaps, be better to take samples of flour instead of bread, as there had been a few cases lately of flour adulterated with Maize (Indian Corn) and was very much easier to detect in flour than in the bread after it had been baked. It might be considered, perhaps, that the number of adulterated samples was very small, but it had been repeatedly pointed out by the Local Government Board that the larger the number of samples taken the smaller the proportion of adulterated ones, and the more efficient was the act in stamping out adulteration. In the County of Cheshire, for instance, where about 250 samples were taken regularly every quarter, the proportion was much less, being usually under 5 per cent. It should, therefore, be considered that the smaller the proportion of adulteration the more satisfactory was the condition, but that condition could only be maintained as long as a sufficient number of samples were taken regularly and systematically.

IMPORTANT JUDGMENT *re* SERVING OF SUMMONSES.

Mr. Ricketts Scores Again.

At North London Police Court yesterday, Mr. Fordham delivered an important judgment on the service of summonses under the Adulteration of Food and Drugs Act. He said—An information was laid by Mr. A. L. Bridge, one of the inspectors of the Middlesex County Council, against a milk dealer named Adams, disclosing an offence under the Sale of Foods and Drugs Act, 1875. A summons was granted on May 19th, returnable on May 29th. On May 29th Adams did not appear, but Mr. Ricketts, his solicitor, pointed out to the Court that inasmuch as the summons returnable on the 29th was served on the 22nd there had not been seven days between the service of the summons and the day on which it was returnable, as required by section 10 of the Sale of Food and Drugs Amendment Act, 1879. Mr. Ricketts contended that this section meant that seven clear days must elapse between the day of service of the summons and the day originally fixed for hearing. Mr. Earle, for the County Council, contended that the days need not be clear days, and further that the day of actual hearing, which might be fixed by adjournment, was the return day. With regard to the last point I never had any doubt. The day originally fixed in the summons as the day of hearing is the return day ("Reg v. the Registrar of Leeds County Court," 16 Queen's Bench, 691). The point upon which I felt doubt, and which I took time to consider, was whether it was necessary in order to comply with section 10 of the Act of 1879, that seven clear days should elapse between the day of service of the summons and the return day. The point is a very fine one, and I looked at a considerable number of cases which appeared to be authorities, and I find the question of the computation of time summarised in a very careful and exhaustive judgment of Lord Justice Chitty in "Re the Railway Sleepers Supply Company," 29 Chancery Division, 204, which is referred to in "In re North ex parte Hasluck" (1897), 2 Queen's Bench, 264. After reviewing these cases, neither of which was referred to by the learned gentleman in this case, I have no hesitation in holding that seven clear days must elapse between the day of service and the day upon which the

summons is returnable, otherwise the summons is not duly served. Now here, the summons being served on May 22nd for May 29th, only six days elapsed. Therefore the summons was not duly served, and the defendant did not appear. Under these circumstances I have no jurisdiction in the matter, and I shall mark the summons "Not served."

The Council will be unable to take further proceedings as they are out of time, as summonses must be served within 28 days from the date of purchase.

WATER AT SPIRIT PRICE.

At Westminster, on June 13th, the St. George's, Hanover Square, Vestry, by summonses, prosecuted Mr. Alfred Gandy, wine merchant, of Gillingham-street, Pimlico, and Mrs. Emma Durrant Russell, of the Victoria Wine Company, 160a, Ebury-street, S.W., for selling rum adulterated with water below the statutory strength to the prejudice of the purchaser. There was a similar summons in respect of gin against Mr. William Carpenter Hall, of the Gun Tavern, 125, Lupus-street, Pimlico. Mr. C. Munroe was Counsel for the vestry, and the several defendants were represented by Mr. Roberts, Mr. Maitland (Maitland, Peckham and Co.), and Mr. T. D. Dutton.—On behalf of the parochial authority, Counsel said the question at issue was the sufficiency of notice of spirit dilution to customers. There had been many irreconcilable decisions, and the vestry thought that specific disclosure should be made by vendors. Evidence was given in the cases of Gandy and Russell that cheap bottles of spirits were purchased by the vestry's inspector, and that they were wrapped in paper before being handed to him after being taken from a shelf. When the wrapper was taken off, it could be seen that there was a notice on each bottle. In Gandy's case there was a label on the neck, "Strength is guaranteed to be 36 under proof by distillation at the time of bottling." The notice on the Victoria Wine Company's bottle very conspicuously announced that the strength was 33 under proof. The Magistrate asked if it was admitted that there would have been sufficient notice if the bottles had been handed to the purchaser without being wrapped up. Mr. Munroe said certainly. A number of cases were quoted for the defence, and Mr. Maitland said there would be no security for the retail trade if such prosecutions as this could succeed. So long ago as 1878, Lord Justice Cockburn said, in the case of Sandys and Small, "the seller may insure himself protection against the possibility of the enactment operating to his prejudice. If he delivers the label as provided by the Section (Section 8), he protects himself against all possibility of being charged with an offence under the Act." Mr. Marsham: That is only a sort of *obiter dictum*, and there have been a good many cases since 1878. Mr. Maitland said the recent cases were all in favour of the trade. The notice at the bar of a public-house had been held sufficient, and his contention was that it was absolutely immaterial whether the label was pointed out or not. Only general notice, and not specific notice, was necessary for the sale of spirits below the strengths fixed by the Amended Adulteration Act of 1879. Mr. Marsham decided that the labels on the bottles were a good and sufficient notice, and he dismissed the summonses against Mr. Gandy and the Victoria Wine Company. The last summons against the landlord of the Gun Tavern, Pimlico, was relative to a pint of gin sold in one of the bars, from which, it was alleged, no dilution notice was visible. Mr. Dutton mentioned that three of the ordinary trade notices were in other parts of the house. The facts were in dispute. Mr. Marsham said there ought to have been a notice in every bar. In this case he fined the defendant 10s., and £1 5s. costs.

JAMES MORGAN, landlord of the Roggiatt Hotel, was fined 40s. and costs at Chepstow, on June 13th, for over adulterating his whisky.

GOVERNMENT AND THE PETROLEUM FLASH-POINT.

It would be hard to conceive anything more contemptible than the figure Mr. Balfour, leader of the House of Commons cut on Monday last. Our contemporary, the *Chemical Trade Journal*, which has stuck to this question with tenacity asked last week "When will a Petroleum Bill come?" and said "It is now three months since the wavering members of the House of Commons were induced to side with the Government and form a majority to reject Mr. Reckitt's Bill; and the troublesome members were hushed by Mr. Collings' promises of a Government measure which was "in a forward state of preparation," and "soon" to be introduced, and which would deal fully with the questions at issue; and yet only last week the Home Secretary had the assurance to state that "he was not at present in a position to say when the Government Bill dealing with petroleum would be introduced, or to state the nature of its provisions."

We are familiar with the convenient delays which are so skilfully manipulated by the S. O. Co. in the States, in order to benumb the senses of the public, or the authorities, whenever they are roused to a state of activity which even dollars cannot allay, but we did not know the members of the House of Commons could be hoodwinked in this way. After three months not a word or a hint is forthcoming to reassure those who feel the responsibility of sacrificing 100 lives a year that this long promised Bill has progressed another inch towards completion."

This as everyone who has followed the question knows was Mr. Colling's promise made on behalf of the government. What then can be thought of the honour and truth of Her Majesty's Ministers, when we find Mr. Balfour on June 20, replying to Mr. Harold Reckitt's enquiry, as to when the Petroleum Bill, which had been promised ever since the month of March, would be brought in by the statement that no pledge had been given! It would appear that in addition to having bought the petroleum output of America, Mr. J. D. Rockefeller has also bought the honour of Her Majesty's Ministers. We must confess we never looked to seeing Mr. Balfour a scholar and gentleman sinking to so low a depth as this.

Meanwhile, the roasting alive of English men, women and children to swell the profits of the "Boss" of our House of Commons, Mr. Rockefeller goes on unchecked. Time truly for another "Prides purge."

TO STAMP OUT TUBERCULOSIS IN CATTLE.

An example to Local Authorities.

As the Government through Mr. Walter Long has refused to grant any compensation to the butcher who buys cattle believing they are healthy and afterwards finds he has had palmed off upon him tuberculosed animals, it behoves butchers, sanitarians and local authorities to consider how they can best put down the sale of tuberculosed meat. The *Meat Trades Journal* in its last issue states that "The view taken by Hull traders is simply this, that municipal authorities as guardians of the public interest are bound (among other things) to see that the food of the people is pure and wholesome. As one means of securing this the Hull Corporation have determined that on and after 3rd July next no live stock shall be offered for sale except under a guarantee that they are fit for human food. The Corporation of Hull have, in our opinion, taken a broad and intelligent view of their duties. Their action has been solely guided by a desire to protect the public health, and although it may seem to farmers and auctioneers that their method of doing so is high-handed and oppressive, those now so keenly touched must not forget that hitherto all the burden and shame of tuberculosis seizures were cast upon the butcher. We have it on the authority of the President of the Board of Trade

that the "only way of meeting one combination is by another," and as the Hull agriculturists and auctioneers have evidently combined with the view to disposing of their tuberculous stock without check or supervision a counter combination has become necessary. That the Corporation of Hull is associated with the local meat traders in protecting the public health is a detail we seriously commend to the notice of the Local Government Board. If other municipal bodies in their wisdom should decline to follow the example of Hull the only alternative is that the traders of the country must do what their Hull brethren have done and demand in the paramount interest of the public health that the stock purchased by them shall be fit for human food. The possession of a tuberculous animal is as much an ordinary trade risk to the breeder, farmer and feeder, as it is to the butcher, and they must be prepared to accept it."

This action of the Hull Corporation is timely and wise, and we hope it will be followed by plenty of other Corporations, and that Mr. Walter Long will receive the snub, his conceit, ignorance and contempt for the mere trading classes merits, and be relegated at the next election to a private life from which it is a pity he ever emerged. As a minister the Government boasts no more miserable failure, and it has a few *miserables*.

MARGARINE WITH TEN PER CENT. OF BUTTER.

OUR comments on the folly of the proposal approved by the Grand Committee to allow 10 per cent. of butter and no more to be mixed with margarine, is approved by one of the largest retail firms in England. Daniel Melia and Co., Ltd., write that "The Bill in its present form will not stop the fraud which is taking place daily, sapping the honesty of both masters and men. There will be more rigorous inspection (without any protection against mistakes), and quite as many prosecutions and convictions—in fact, the whole thing will be seen to be a farce before the Act has been in operation three months."

"Other countries legislate firmly on this subject. Why should we be more sentimental than our colonial and continental friends?"

The person to be studied and protected is the innocent purchaser, who is now buying margarine for butter at butter price, and who will continue to do so unless and until something is done which will enable him to easily distinguish the difference by the appearance. Only last week we made a purchase at a London suburban shop of a compound which was being exposed for sale as butter at 1s. per lb., the neighbourhood having previously been billed with it as a leading article; on analysis by an eminent public analyst it was found to contain over 90 per cent. of foreign fat, and less than 10 per cent. of butter fat. The original cost to this unscrupulous retailer would be about 38s. per cwt. (or, say, 4d. per lb.)"

We do not agree with the demand to prohibit the colouring of margarine. We believe that were it only allowed to be sold in square packages of quarter, half, one lb. and two lbs., properly labelled, its fraudulent sale as butter would be stopped, but the new bill is outrageous in the 10 per cent. admixture clause, and if it be carried it will cost retailers dear.

ENGLISH BEER IS AS BAD AS AMERICAN.

THE recent analyses by Dr. F. T. Aschman, of Pittsburg, of twenty-seven samples of beer brewed and sold in Pennsylvania, are published in a bulletin just issued by the State Department of Agriculture. This bulletin states that during the past two years the attention of the Department has been repeatedly called to the statement that injurious materials were being used in beer, and twenty-seven samples were submitted to Dr. Aschman

for analysis. In commenting on his work, the doctor writes:

"Looking over these results, we find two facts especially noticeable; that the old definition of a true beer will no longer hold good for the majority of the beers sold within our State; and that in many instances preservatives and carbonating and 'improvers' are used, to prevent the spoiling of the beer or to aerate or improve it. According to all authorities, beer should be a beverage obtained by fermentation, partial or complete, without distillation, from barley, malt, hops, yeast and water. The results obtained, especially the percentages of extract, albuminoids, ash and phosphoric acid, indicate that in a large proportion of our beers, rice, corn and grape sugar are substituted to a great extent for malt made from barley. This practice has grown to an enormous extent in our country, and is partially due to the demand on the part of the American public for a light coloured, sparkling beer. The use of grape sugar and other saccharine substances is the most objectionable specified, as they are entirely lacking in the important mineral and nitrogenous principles of the malt and other grains.

"The use of preservatives and 'improvers' is also, unfortunately, practised to a considerable extent, and is undoubtedly the most important adulteration of beer, and one which should be prohibited, ferreted out and punished wherever found. These materials are objectionable for many reasons. They introduce foreign and often deleterious substances into the beer; permit the marketing of badly brewed or spoiled articles, and they prevent the public from judging of the true character of such spoiled beers when they are really unfit for consumption.

"I have not been able to detect in the samples of beer examined any substitute for hops—at least, not with certainty; although in one or two cases foreign bitter principles seemed to be indicated, but could not be further investigated for lack of material and time. One rather remarkable result obtained is the low average per cent. of alcohol in the samples examined. The published analysis of American beers place the average amount of alcohol at $4\frac{1}{2}$ per cent. and over, some of them showing as much as nearly 7 per cent., while the samples here reported, show an average of but 4.005 per cent. of alcohol, and none of them more than 4.56 per cent.

ISLINGTON VESTRY AND THE NEW FOOD AND DRUGS ACT.

THE Public Health Committee brought up a report in reference to the Sale of Food and Drugs Bill now before the House of Commons. The Committee recommended that the Local Government Board should be asked to take steps with a view to the Bill being amended in the following respects as suggested by the Vestry's analyst, Dr. Teed, viz., that provision should be made for the full disclosure to the purchaser of butter or milk of the quantity or nature of any preservative that may be present; that, it being undesirable that the authority that has to decide on questions of analytical data (a court of appeal from the analyst) should also be the authority for deciding in what form the analyst, whose work it might have to review, should state his results; that in the event of no court of reference being constituted the Board of Agriculture should be the authority for drawing up the form of certificate, that a court of reference should be constituted; that means should be provided for the prosecution of the giver of a false warranty; that the publican should be prevented from contracting himself out of the Act by the exhibition of an almost illegible notice: that the definition of "Food" be extended so as to include substances like baking powder, which, though not actually foods, are used in their preparation. The recommendations were agreed to unanimously.

POST OFFICE TOMFOOLERY.

AMONGST the birthday honours the name of that staunch opponent of post office humbug. Mr. Henniker Heaton, M.P., was again to everyone's surprise absent for the usual reason—his sturdy common sense has shown how fatuous is the administration of our postal system. Every thinking man knows that as head of our postal department, Mr. Henniker Heaton, would be the right man in the right place, hence the reason why he is not there, and why £2,500 per year of public money is thrown away on the well meaning, but incapable Duke of Norfolk. We have just witnessed another instance of the exasperating lunacy of our postal regulations. Our contemporary, "*The Caterer*" must be, they decree, posted as a parcel costing 3d., whilst other newspapers weighing more than "*The Caterer*" are carried for $\frac{1}{2}$ d. in obedience to some idiots red tape dictum. But our contemporary was posted in a letter box instead of in a parcel post box, and for this "posting out of course" the recipient has to pay 1d. extra. "*The Caterer*" is so useful and ably edited a journal that its readers may not object to pay an extra penny, but that is beside the point. Our postal system is controlled by incompetents who draw enormous salaries to devise such petty annoyances and make grossly unfair distinctions between our journal and another. If "*The Queen*" or "*The Lady's Pictorial*" weighing at times 1 pound or more can be carried by post for $\frac{1}{2}$ d., it is a dishonest charge on "*The Caterer*" that it should have to pay 3d. for 12 ozs. weight, and officials responsible for such pettifoggery and unfair proceedings are public pests. This is no solitary instance for it affects numerous trade journals, and it is time the about post office authorities were told a few plain truths themselves.

The Office of Postmaster General ought not to be the reward of political parasites, or be used as a bribe to secure the support for one party or the other of territorial magnates. It is too important in its effects upon the prosperity of England's commerce, and requires a man of brains at his head. To give £2,500 a year of public money to a well meaning, Ducal dabbler in miracles and medieval architecture is jobbery of the worst kind.

OUR MILK SUPPLY.

SIR JAMES BLYTH, BART. says, in France, during the ten years ending 1892, the average yield of milk, owing to more judicious breeding and feeding, increased by twenty-two gallons per cow, which would alone give an additional 118,000,000 gallons of milk from the number of cows returned in France in 1892. If in this country they assumed the mean average yield—that was $1\frac{1}{2}$ gallons (11 imperial pints) per cow per day—to be a fair all round yield, they would in round figures have an annual production from 4,000,000 dairy cows of 2,006,000,000 gallons, equal to 50 gallons of milk for all purposes per head of population. Deducting 50,000,000 gallons of this whole milk for the rearing of calves, and 800,000,000 gallons for consumption directly as milk, there would still remain of whole milk for conversion into butter and cheese, 1,156,000,000 gallons. Assuming that this residue of whole milk was used in the proportions of one-fourth for making cheese, that would absorb 289,000,000 gallons, and three-fourths used for making butter would account for the remaining 867,000,000 gallons which—reckoning $2\frac{1}{2}$ gallons to each pound of butter—would be equal to a total butter production of nearly 347,000,000 lbs., or over 8 lbs. of butter per annum for every man, woman and child in the kingdom. There was no reason why there should not be an increase to the extent of at least 50 gallons per cow per annum in a few year's time, which would thus give an additional 200,000,000 gallons of milk, and probably of a superior quality. Thus, assuming that we shall continue to have at least 4,000,000 of dairy cows, giving on the average $1\frac{1}{2}$ gallons of milk per head per day, or say, 550 gallons annually, they would then

have the enormous quantity of 2,200,000,000 gallons of milk produced in this kingdom. By setting aside 1,200,000,000 gallons for butter and cheese purposes, and for the rearing of calves, 1,000,000,000 gallons would be available for consumption as milk, equal to 25 gallons per annum per head of the population. It did not require prophetic inspiration to predict that we are on the eve of discovering means for preserving the freshness of milk for days, and even weeks, without change of flavour, and at a trifling cost. At the present time various processes are employed for retarding changes in the composition of milk. The method least open to objection is sterilisation, the other method of preserving the freshness of milk consisting in putting into it certain chemical substances, which had the power of destroying microbes. As to injurious consequences following on these methods there is a conflict of scientific opinion, but we must hope that some antiseptic would ere long be discovered which would be altogether free from objection. The great recommendation which such a preservation would have is simplicity in its use.

THE NEED FOR PURE LIME JUICE.

AFTER exhaustive tests, the British Government adopted "Montserrat" Lime Fruit Juice for use in the Navy, and in this decision we consider there is ample evidence that the authorities have judged wisely. Experts have long been aware that the purest and best lime juice is that grown in the Island of Montserrat in the West Indies, as it is prepared from *cultivated* Limes, and it is well that it has received the Government imprimatur.

It is notorious that an enormous amount of spurious lime juice and lime juice cordial prepared from chemicals, and having only a trace of the poorest quality of so-called "lime juice," is sold to the public as the genuine article!

The prosecution we recently recorded (on page 283), brought to light how grossly the public is deceived by the frauds we mention. Dr. Falconer King found the "Lime Juice" to be merely a concoction of water, sugar, and acid, with possibly a small quantity of lime juice added to give it flavour! Pure "Montserrat" Lime-Fruit Juice is a most valuable drink, and from a health point of view we can safely say there is scarcely a drink to equal it; therefore any attempt to lessen its value by sophistication should be sternly suppressed. It would be a great pity if the sale of fraudulent chemical concoctions pretending to be the juice of the lime fruit, cannot be put down, as they certainly should be in the public interest. It is very satisfactory to note that the "Lancet" is so strong in supporting such a genuine brand as the "Montserrat."

A NEW BREAD WHICH CURES RHEUMATISM.

OF the making of new breads there appears to be no end, and when these claim to have certain peculiar properties hitherto undreamt of, we feel it to be our duty to direct attention to them. Our interesting and up-to-date contemporary, the *British Baker*, announces something which ought to interest medical men. It says: From a chat one of our representatives had with Mr. John Dalziel, the managing director of Messrs. John Law & Co., Limited, 219, Stirling Road, Glasgow, we are able to give some particulars of this new boon to bakers and rival to chemists. After careful experimenting, which was carried out by a practical baker and an eminent medical practitioner, Mr. Dalziel has succeeded in producing a bread which is similar in appearance and taste to Sweet Milk Bread, and at the same time contains active ingredients which have a powerful effect in curing rheumatism. The bread is eaten precisely in the same quantity as ordinary bread, D. L. Anti-Rheumatic Bread being substituted in place of ordinary bread. As a general rule, one person should consume one loaf in three days; but to derive benefit, the bread should be used regularly. This bread will keep moist for a week, but it

is best when from one to three days old. Messrs. Law and Co. have certainly put their discovery on the market in an attractive form, each loaf being wrapped in a sheet of pure tinfoil. The advantage of this is that the bread in this way retains the full value of its ingredients, but bakers taking up the agency for D. L. Anti-Rheumatic Bread will be allowed a free hand in the matter of get-up. In order to introduce the new bread to the Trade, Messrs. Law and Co. will send a sample 1 lb. tin of their powder on receipt of 3s., which will allow the Trade to judge for themselves the value of the discovery. It should be added that the firm have introduced the bread in their own five shops, and it is the pleasing demand that has been accorded them which has decided them to offer it to the Trade.

WHAT IS DONE WITH THE BY-PRODUCTS OF MEAT PACKERS.

THE great Chicago packing houses get a great deal more money for the by-products incidental to the killing of a steer than the meat sells for. On the average the meat and its compounds bring 40 dols. while the by-products bring in at wholesale 55 dols. The latter sum is roughly made up as follows:—Hide, horns, hoofs and hair, 25 dols.; fats, blood, sinews and bones, 15 dols.; miscellaneous and other wastes, 15 dols.

It is only in the large and well-appointed slaughter house that the full value of the animals dealt with can be realised, and there become factories for a great many products, besides finding the proper and most profitable markets for each of the raw products into which they separate the animals. Nothing is allowed to go to waste, and ten years ago one of the largest butchers in the city declared that the Chicago packers were paying the entire cost of slaughtering cattle out of what the butchers here were paying to have carted away. Hides, horns, hoofs, and hair have had their markets for many years and their value increases steadily. This is particularly true of horns, for the practice of dehorning cattle has become so general that in one great Chicago packing house it was found during a two year count that the returns only showed one horn to every three bullocks. Horns are now worth about 150 dols. a ton. The hides go to the tanner, the hair for mixing in mortar. The tails don't go with the hides. Down at the tip is some long hair, and this is said to be turned into curled hair for upholstery.

If the hoofs are pure white they have a peculiar value. They are sent to China for jewelry making. Those which are striped, black or damaged, go into the kettle to be boiled for glue and the residue made into hoof meat, a valuable fertilizer. In fact, everything which is not used for other purposes is at last turned into some form of fertilizer, even to the tankage water in which the coarsest of the refuse is boiled to extract its fats. The coarse bones are either carbonized and sold for sugar refiners' use or turned into fertilizers, and the blood is mostly dried and turned into another aid to agriculture. Some of the blood is sold in liquid form to sugar refiners, but not a great deal. The white bones, suitable for knife handles and such purposes bring from 70 dols. to 90 dols. a ton and go mostly to Germany.

The main parts of the animal as they are sent to market are all carefully trimmed, but there is no piece of good meat but has its market. Tongues and tails are regular articles of commerce, and even the meat from the cheeks is added to the supply for sausages and the lips are cut off and pickled. Each character of fat is separated from the others and finally these are marketed in the various forms of neat's foot oil, oleo oil, tallow and stearine and oleomargarine. Before the horns are sold the pith is extracted from them and the finest grade of gelantine is obtained from the pith.

The sinews are all separated to be used for glue stock, the bladders are sold for holding snuff and the greater part of the intestines are used for sausage casings. Parts

of these have, however, a special use and value, and are sold separately to be made into goldbeaters' skins. The lining of the windpipe is also of particular value, being used for a fancy sausage casing, and also as a lining for pipes through which beer is passed in breweries. Beef extract, pepsine and many other things are made in some of the biggest houses.

A new use has recently been discovered for the contents of the paunch, which until lately had to be thrown away. It has been discovered that a good quality of cardboard can be made of it and it is now being saved for that purpose. Of course, the large receipts from these by-products are not all profit, but there is a manufacturer's profit made out of each one of them which aggregates a handsome sum, and all of this helps to keep down the price of the fresh meats to the consumer.—*Retail Butchers' Review.*

BUTTER MADE FROM NUTS.

THE peanut is one of the most prolific and easily grown of all nuts, and its consumption in America is increasing millions of pounds yearly. All nuts form a very nutritious food when properly eaten, but medical authorities have given the peanut especially high praise. Aside from its being eaten when roasted, there are many preparations that can be made from it, which have already made for it a good market value for such purposes. One of these is the grinding and converting of it into flour, in which form many excellent uses made be made of it. The latest use to which the nut has been put is the making from it of a pure and palatable substitute for butter. The nuts after careful roasting are put through a mill, and ground as fine as the finest flour. The nut possesses a great deal of oil, and as it is made into flour, this oil makes it of a thick, creamy consistence, which, if it has been properly roasted, is of a rich orange colour. By the addition of a small quantity of filtrated water, it is made of the exact softness of butter. No preservatives are necessary, and it never becomes rancid. It has met with the hearty approval of all who have used it, and doctors have highly commended it for its healthfulness. It can be used for all purposes for which butter is used, including shortening and frying. By the addition of more water it can be made to serve the purpose of cream or milk.

SECRETION OF MILK.

THE following statement concerning milk and its secretion is taken from a very useful little work, "Elementary Physiology," by Ainsworth Davis.

It may be said to represent the latest determinations of physiological investigation concerning this very interesting subject.

The milk glands (the udder) are not merely to be regarded as arrangements by which certain materials are strained out of the blood. The milk tubules are very closely surrounded by a net-work of capillary blood-vessels and constitute a fitting apparatus so far as the water contained in the milk is concerned. But that a great deal more than simple filtration takes place follows from the fact that casein, milk-sugar, and butter-fat are not present in the blood, while there are considerable differences between the two liquids as regards the inorganic salts, milk containing, for instance, far less sodium chloride (common salt) than blood, but much richer as regards potash compounds. In short, the protoplasm of the glandular cells, which line the blind ends of the milk tubules break down into the simpler chemical substances, casein, milk-sugar, butterfat, etc., which are therefore produced much the same way is the pepsin of gastric juice, or the ptyalin of saliva. But in this case there is not only a chemical breaking down of protoplasm, but also a *disintegration of the cells*, which, so to speak, are constantly "moulting." For this reason milk has been termed "dissolved milk gland," using the expression

somewhat metaphorically. An interesting proof of this is found in the nature of *colostrum*, the fluid which is secreted by the milk glands just after the birth of the calf, and which differs a good deal from milk in composition. If a drop of this is examined under the microscope, it will be found to contain not only milk globules, but also larger bodies *colostrum corpuscles*, some spherical, some irregular, which are obviously discarded cells.

The constant breaking down, which takes place in a milk gland, is counterbalanced by a corresponding process of renewal and reconstruction, the materials of which are supplied by the blood.

During milking the *sphincter* muscle of the teat is relaxed as the result of reflex (or sympathetic) action, so that the milk can flow out of the milk cistern. It has also been commonly assumed that a large amount of milk is actually secreted during milking, as another result of reflex action. The main argument in favour of this view has been that the cavities of the glands are not large enough to contain the amount of milk actually yielded at one time. It must be remembered, however, that these organs are very elastic and capable of great distension, besides which careful experiments recently made do not support the usual view.

FACTORS INFLUENCING THE AMOUNT AND QUALITY OF MILK.

In this connection (1) the breed is of very great importance, determining as it does the tendency of the glands to secrete a greater or less total quantity, and to produce milk more or less rich in butter-fat. (2) Diet. The essential point is that the food should be rich in albuminoids (protein) the most favourable ration being 1 to 5.4. It is quite a mistake to suppose that an increased percentage of butter-fat in the milk results from giving more fat or oil with the food. Careful experiments made on feeding of cows shows that, if anything, the tendency is the other way. From what has already been said on the secretion of milk, it follows that the fat of the food does *not* pass *as such* into the milk, a fact which enables the experiments quoted to be more clearly understood.

A reasonable amount of water taken with the solid food increases the secretion of milk, and so does common salt, of which from $\frac{1}{2}$ to $\frac{3}{4}$ of an ounce may with advantage be given daily to the cow. (3) The state of the *general health* naturally exerts an important influence upon the production of milk, for all the organs of the body are more or less independent.

It is, therefore, a matter of *practical* importance to secure the health of cows by feeding them properly, by *ventilation and cleanliness*.

Some interesting experiments have been made as to the effect exerted by a proper care of the coat. The amount and quality of milk yielded by a number of cows were carefully determined for two periods of two weeks each, no attention being paid to the coat in the first period, while during the other it was carefully brushed and curry-combed every day.

In the latter period the yield of milk was considerably greater, and there was a distinct increase in the percentage of butter-fat.

The yield is diminished by exercise, the amount of which should not, therefore, be increased beyond that actually necessary for the health.

(4) The quantity and quality are not constant throughout the period of milk yielding lactation. The maximum quantity is secreted during several weeks after the birth of the calf, then a gradual diminution takes place.

(5) TIME OF MILKING.

The morning milk is poorer in solids than the evening milk, while that obtained at noon is richer than either. In other words, the longer milk remains in the udder the poorer it is in quality, though at the same time the quantity is greater. Experiment has also shown that three milkings a day are more advantageous than two, the total yield being greater and the percentage of butter-fat higher.—"Hoard's Dairyman."

GLUCOSE IN JAMS.

THE recent prosecutions for glucose in golden syrup raised a nice question. If glucose in golden syrup be an adulteration, why is its presence in jams not objected to. It is alleged that the bulk of the cheap jams are made with glucose, but as yet we have seen no analyst reporting against the practice.

THE NEW FOOD AND DRUGS BILL.

It is quite possible that Mr. Long's Food and Drugs Bill may succumb to the Opposition. The margarine interest is working very hard against the Bill, and Sir John Leng's amendment is very strongly supported in the House. Sir John proposes to move as an amendment on the report stage that the House decline to proceed further with a Bill which violates the principles of free trade in the mistaken interest of a class of producers whom it will not benefit, is an unprecedented attempt by legislation to compel the production and sale of an inferior instead of a superior article, and denies the right of trial by jury in cases where heavy fines and imprisonment are proposed for merely statutory offences. It will be remembered that the Bill proposes to prohibit the sale of margarine containing more than 10 per cent. of butter.

SOLID WINE.

THE fertility of the inventive brain, says a writer in a Bordeaux medical paper with comprehensive plaintiveness, is at once amazing and inconceivable. An engineer has recently contrived to prepare what he calls "a concentrated essence of vinic plants, the best of all methods for producing an exquisite wine." According to the prospectus issued by this ingenious person, two of his tablets, costing each 2 franc 50 centimes, are sufficient to yield 110 litres of a liquor containing all the qualities of natural wine, from which it is indistinguishable.

Not only does the compound possess a most agreeable flavour and a delicate aroma, it is likewise unrivalled as a refresher of the slightly damaged wines that are customarily used diluted. The fresh taste and freedom from acidity of this pseudo-wine lead to its constantly being mistaken for a genuine claret of the most approved vintage. The process for converting the tablets into wine is simplicity itself. They have merely to be boiled in a little water, the decoction, when sufficiently cooked, being further diluted and sweetened to taste.

It is scarcely necessary to add, says the reports in conclusion, that this notable invention has been patented, that its trade-mark has been duly registered, and that already two gold medals of the first-class have been awarded in recognition of its many virtues.

MEAT INSPECTION.

LIVERPOOL butchers have done well for their class in causing the qualifications of meat Inspectors to be brought before the city Council and the House of Commons. Upon every occasion on which an appointment is made we should like to see the local butchers challenge it in their own interests, and in those of the public. The butchers reputation and trade are at stake and the question of meat inspection raises such grave public health issues that it should be out of the power of any local authority to appoint any but a thoroughly qualified man—a butcher with some sanitary training in preference to any save a Veterinary Surgeon, but as the salary is not tempting enough for the latter the appointment should practically be open only to the butcher. The good results of appointing practical men for the work are so apparent in Holborn and Islington that public bodies everywhere should follow their

example. It is absurd to dub any clerk, greengrocer, baker, or milkman, a meat inspector, and expect that he can tell safe meat from that which may scatter disease broadcast, yet this is what has been done all over the country.

ADULTERATION IN BELFAST.

DR. JOHN F. HODGES, F.I.C., F.C.S., Belfast City Analyst in a report to the City Council, states that during the past quarter I have submitted to analysis 144 Samples of Food, &c. Of these 16 samples, viz.,—11 of Butter, 4 of Sweetmilk, 1 of Buttermilk were found to be adulterated, and fines amounting to £31 were imposed by the magistrates.

It may be recollected that shortly after my appointment, twenty years ago, I was obliged to direct attention to the contamination by lead of much of the Aerated Water manufactured in the city. This was occasioned by the employment at that time of lead pipes in the apparatus used. I am happy to be able to report that this impurity in those beverages no longer exists, and that in all respects they are deserving of the high reputation which they have gained both at home and in several foreign countries.

REVIEWS.

The South Coast Quarterly is a beautifully printed and illustrated magazine issued by the London, Brighton and South Coast Railway, for the purpose of making known the delightful scenery of Sussex. An article by Mr. Joseph Hatton relates what will be news to many, how Sussex was a century ago, the home of the English iron industry, and the causes of its decay. Well written articles on charming rural spots in Sussex are contributed by the Editor, Mr. Percy Lindley, and others, and the drawings and reproductions of photographs are artistically executed.

A great deal is said of the progressive spirit of the L.B. & S.C.R., which is hardly deserved. It is bad business and bad catering for the public, for instance, that the early morning train service from Brighton to London should be so poor that survivals of barbarism like the 8.45 a.m. first class only from Brighton to London, and the 5 p.m. London to Brighton should exist. The more enlightened policy of the Midland Co., would give better satisfaction and pay the L.B. & S.C.R. better than its present one of favoritism for snobbery.

IN "The Art of Advertising," by W. Stead, Jun., published by T. B. Browne, Ltd., 163, Queen Victoria Street, London, E.C., 3s. 6d., a great amount of useful information is presented in a fresh and readable manner. It would be news to Her Majesty, to her faithful ministers, to the parson, the painter, the doctor, the public analyst, that they are all guilty of advertising and that their expressed horror of it is only so much bunkum, but Mr. Stead, Jun., with a sort of Carlylean ruthlessness states: "We all advertise, from the Queen on the throne to the shoeblack in the street," and he proves it too. The Court Circular, the postage stamp, our coinage, the Royal Standard are all nothing more nor less than a colossal and free Royal Advertisement. The doctor's red lamp and the analyst's brass plate are all advertisements, as are the bulletins the great medico issues when he has an illustrious patient. From the study of the general in advertising, Mr. Stead comes to the particular and enters thoroughly into the relationships existing between the great advertising home of T. B. Browne, Ltd., and the many enormous businesses they advertise at home, abroad, and in our colonies. The various forms of advertising by poster, by magazine, and by newspaper, pictorial and non-illustrated, are ably dealt with, and however vigorous and full of energy any advertiser may be, enough is shown in this work to prove that the advertising contractor, whose life study it is, can not only save his client money, but relieve him of an enormous amount of work and worry.

COLEMAN'S "WINCARNIS"

OR

LIEBIG'S EXTRACT OF MEAT & MALT WINE

IS THE FINEST TONIC IN THE WORLD.

OVER TWO THOUSAND TESTIMONIALS

Have been received from Medical Men.

Seven Gold Medals and One Silver Medal

Have been awarded.

Sold in Bottles, 2/9 and 4/6 everywhere.

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COLEMAN & CO., LIMITED, NORWICH and LONDON.

A 2s. 9d. Bottle sent Post Free on receipt of 33 Stamps.

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Bound volumes of Vol. I., II., III., V., and VI., may be obtained from E. W. ALLEN, 4, Ave Maria-lane, Paternoster-row, London, E.C. Price 5/- each.

Binding Cases for FOOD AND SANITATION, in cloth, gold lettered, may now be obtained from E. W. ALLEN, 4, Ave Maria-lane, London, E.C. Price 1s. 6d. each.

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Food and Sanitation.

SATURDAY, JULY 1, 1899.

SPECIAL NOTICE.

CHANGE OF ADDRESS.

All communications for the Editor of "Food and Sanitation" must be addressed to

4, AVE MARIA-LANE,
LONDON, E.C.

ALLEGED SPURIOUS MARTELL'S BRANDY.

A CASE which came before the Clerkenwell Police Court on June 27th, shows that Messrs. Martell and Co. are now alert to the very serious evils of fraudulent substitution of inferior and cheaper brandies as their well known "Three Star" brand.

There is no doubt that an enormous amount of injury has been done to Martells for years past by the practice of some publicans who fill Martell's empty bottles with cheaper brandies, but it is very difficult to find the guilty ones.

Lucian Besser, of the "White Hart," Theobald's-road W.C., was charged before Mr. Horace Smith, for falsely applying to brandy the trade-mark of Messrs. Martell and Co.—"Three Star Brandy"—contrary to section 2 of the Merchandise Marks Act, on 8th June. There were two other summonses against the defendant for selling the goods and exposing them for sale.

Mr. Bodkin appeared for the complainants, and Mr. Arthur Newton for the defendant.

Mr. Bodkin said Messrs. Martell and Co. were probably the largest shippers into this country of a Cognac brandy known as the "Three Star" brand. They only shipped it in bottles with a blue and silver label, a three-star neck label, and a cork branded in a particular way, and the spirit had a very considerable reputation. In consequence of information received, Messrs. Martell's agents in this country instructed Mr. Jarvis, late detective chief inspector, to institute inquiries on the defendant's premises. On the 8th inst. he with a party of friends called at the "White Hart" and were served with a bottle of brandy purporting to be "Martell's Three Star" brand. They emptied the bottle, pouring some of it into spittons on purpose to do so, and the barmaid put the empty bottle on one side. The defendant afterwards, Mr. Jarvis would say, took the bottle up and filled it up from a bottle of another brand. Jarvis then asked for a pint of Martell's "Three Star" brandy to take away with him, and the barmaid served him from the Martell bottle filled up from another bottle. He was charged 5s. 6d. for the spirit. Counsel said the brand substituted for the "Three Star" brandy was sold at 19s. per dozen less than Martell's Cognac. A double fraud was here committed. The reputation of Messrs. Martell was damaged and the consumer paid a high price for a lower-priced spirit. It was, Mr. Bodkin said, a petty and a mean fraud.

Mr. Frederick Smith Jarvis gave evidence in accordance with counsel's statement; and Mr. Gordon Clark, trading as Matthew, Clark, and Son, London agents to Messrs. Martell, proved that the brandy supplied to Jarvis to bring away was not the "Three Star" brand, nor did it resemble Martell's brandy of any quality.

The defendant had elected to go for trial if the magistrate found the case against him, but it was completed at the rising of the Court, and the summons was accordingly adjourned.

The case being *sub-judice* it would be improper to comment upon it. If the charge be sustained it is as Mr. Bodkin rightly said "a petty and a mean fraud" and considering how wide spread this substitution evil is, affecting nearly every manufacturer of high class foods and drinks, the punishment upon a conviction ought to be the utmost the law allows.

PURE, WHOLESOME, DEICIOUS.

BIRD'S CUSTARD POWDER

The unfailing resource of every Lady of the House
and successful Housekeeper.

NO EGGS! NO TROUBLE! NO RISK!

MARGARINE AS BUTTER.

BEFORE MESSRS. J. B. Stuart, T. M. Percy, J. H. Smith, and J. Partington, sitting at the Wigan County Police Court, on June 21st, Jas. Radcliffe, a shopkeeper of Pemberton, was summoned for exposing margarine for sale without the required label.—Mr. T. Ellis prosecuted on behalf of the Royal Lancashire Agricultural Society, which was a society which acted in conjunction with the County Council. Inspector Parkinson, of the society, visited defendant's shop on the 17th May and asked the price of butter. He was informed what the price was and purchased some, but he was then told that it was known as daisy butter, but it was really margarine. The certificate of the analysis was put in, and this showed 13 per cent. of water, and 80 per cent. fats other than butter.—Mr. Arthur Smith, who defended, contended that Mr. Parkinson did not comply with the Act. He divided the substance into three parts, but did not say it was for analysis.—The Bench thought a technical offence had been committed, and ordered defendant to pay the costs.

AMELIA BAXTER, of Pemberton, was summoned under the Adulteration Act on the 19th May.—Mr. Ellis said this was a bad case, and he was instructed to press for a severe penalty. The inspector purchased some margarine at the shop, and on it being submitted for analysis it was found to contain as much as 21 per cent of water. The society asked for a large penalty because they aimed at the dealers who supplied the small tradesmen with the substance, and the latter persons had their remedy against the wholesale people.—Mr. T. Wilson, who represented defendant, said she bought the margarine from a man at Wigan Market, and she thought it was good.—She was fined 40s. and costs, and ordered to pay the costs in another case of exposing margarine for sale without the proper label.

MARY MERRY, of Ashton, pleaded guilty to selling butter containing upwards of 80 per cent. of fats other than butter on the 26th May. She, however, said it was served in mistake by a girl.—The Magistrates considered it was a serious offence, and inflicted a fine of £5 and cost.—A further summons for exposing the margarine without the proper label had been issued, and defendant was ordered to pay the costs in the case.

HERBERT DAVIES, of Ashton, was summoned for exposing margarine without the proper label on the 29th May.—The Inspector said there were several lumps of margarine on the dish from which he bought his, and there was only one label which was not of the requisite size, and was not on the lump he was served from. The analysis showed that there was 9½ per cent. of water and upwards of 75 per cent. of fats other than butter.—Mr. Ellis said the Inspector visited the shop and asked the price of butter. On being told he bought some, and was served from a basket upon which he could not see the necessary

label. On analysis the substance was proved not to be butter.—The Inspector said the price which he paid was 10d. per pound. He found it was wrapped in paper stamped margarine.—Mr. Ackerley, for the defence, said Mrs. Liptrot, who served Mr. Parkinson, sold the margarine as margarine, and not as butter. It was made up in a margarine wrapper.—Mrs. Liptrot and a servant bore out this statement, but the Chairman (Dr. Stuart) said the magistrates felt bound to inflict a fine of £10 and costs.—Defendant was also summoned for exposing the margarine without the requisite label.—Inspector Parkinson repeated his evidence, and, in answer to questions by Mr. Ackerley, said the basket from which he was served was behind the counter and covered with a cloth.—Mr. Ackerley contended that there was no exposure for sale. The basket was covered with the cloth, and anything might have been in it for what a customer knew. The cloth had to be lifted before the sale was made.—The Bench dismissed the case, having already convicted under the Food and Drugs summonses.

At West Hartlepool, on June 19th, John Innis, grocer, George-street, was fined 40s. and costs under the Food and Drugs Act. Defendant had sold butter wrapped in plain white paper. The butter was margarine, and the defendant should have wrapped it in paper on which these facts were stated. Mr. Wheat, inspector, proved the cases.

At Birmingham, on June 28, Thomas Baker, grocer, 87, Duddleston Mill-road, was summoned for supplying margarine in an unlabelled wrapper. Mr. Buller appeared for defendant, and stated that Baker was not present when the margarine was supplied. The Duddleston Mill-road shop was managed by George Merrick, and the defendant, taking advantage of the provisions of the Margarine Act, had summoned Merrick. Mr. Baker was called and stated that he had been in the trade for twenty years, and numerous samples of various goods had been taken by the inspector from his four shops and no complaint had been made. He had given instructions to his managers to be careful in supplying what was asked for by the public, and he had supplied Merrick with labelled wrappers and tin tickets. Defendant further stated that he was a member of the Birmingham Grocers' Association, and had repeatedly brought forward the suggestion that margarine should be marked in such a way as to make it at once capable of being detected by the public. Merrick, the assistant, said that he had very little butter in the shop and the hot weather had affected it, so that he supplied margarine instead. Mr. Fisher said that the Bench were of opinion that Mr. Baker had exercised due care, and the case would be dismissed.—The summons against Merrick was then heard. Mr. Norris Foster, who defended, said that he had been employed by Mr. Baker for seven years, and this was the first offence he had committed. Merrick was fined £5 and costs, or in the alternative one month's imprisonment.

GEORGE HENRY MIDDLETON, of Stratfieldsaye, was summoned at Basingstoke, on June 21, for selling margarine as butter. The case was proved by Mr. D. Bayley. The analyst (Dr. Angell) certified that it was not butter at all. Defendant was also charged with selling margarine without a label, and this also being proved against him, he was fined £2 and costs for the first offence, and £1 for the second.

At Stratford-on-Avon, William Roberts, of 20, Rother-street, was summoned by Frederick George Bennett, Inspector of Food and Drugs, for selling milk adulterated with 12 per cent. or thereabouts of added water. Defendant pleaded not guilty. Inspector Bennett stated that he called at defendant's shop in Rother-street for the purpose of taking a sample of milk. He noticed that there was in the window a card on which was printed "new milk." He believed it was Mrs. Roberts who was in the shop, and he asked for a pint of new milk. She served him with

some out of a pan on the counter and charged him 1½d. He then told her that he had purchased it for the purpose of having it analysed, and if she wished he would divide it into three parts, as required by the Act. She consented to it, and he then divided it and sealed each one down. He handed the one to Mrs. Roberts and the others he took away with him. On the same day he took one portion to Dr. Bostock Hill at Birmingham, the county analyst, and the other he kept himself, which he produced. He subsequently received a certificate from Dr. Bostock Hill stating that the sample of milk had 12 per cent. of added water.—Defendant then asked the inspector why he did not take the sample from him when he saw him (defendant) take the milk off another milkman at the Fountain. It was then explained that the inspector could take samples when and where he liked, and he said that that morning he had taken several samples from milkmen in the street. Defendant said the milk was sold just as it was received. A fine of 5s. and costs 13s. 6d. was imposed, and the money was paid.

AN IMPUDENT MARGARINE FRAUD.

At the Bishop Auckland Police Court, on June 22nd, the Crook Co-operative Society was summoned for selling butter containing 77.89 per cent. of foreign fat. Mr. B. Scott Elder, Chief Food and Drugs Inspector of the county prosecuted, and Mr. J. T. Proud defended. J. J. Hardiman, wholesale provision dealer, Newcastle, was also charged with supplying the article in question in casks marked "voldries," not "margarine," and containing margarine, to the society's branch at Howden-le-Wear. Mr. Proud, before the case had been opened, said the society wished, as far as possible, to assist the prosecution in this case, as they contended that they had been deceived, that they bought the article as butter, and that they sold it as butter. He would call the person who sold the article to them, and that gentleman would corroborate what he now stated.—Mr. Scott Elder, in opening the case, commented upon the nature of what was undoubtedly an extraordinary fraud, for selling as butter an article containing practically 80 per cent. of foreign fat, at 1s. 2d. per lb., the society's highest price for butter, could not be described as anything else. He was glad Mr. Proud had offered to assist the prosecution, but he would point out that had the society simply obtained a warranty when the article was supplied to them they would not have been in the position they were that day.—Mr. Proud produced a written statement by Hardiman, and said that was the warranty in the case, but Mr. Scott Elder argued that it might refer to other butter.—Mr. M. A. Thompson, Food and Drugs Inspector, spoke to buying the article in question. Mr. Proud next put J. J. Hardiman into the box, and he said he wished to take all the responsibility so far as regarded the Stores. He bought the butter as butter, and sold it to the Stores as butter. Unfortunately the gentleman who sold it to him did not reside in this country. He was a Dane, and the only thing he (witness) would have to do would be to wait for the first opportunity of obtaining redress from him. In reply to Mr. Scott Elder, witness said when the manager of the Stores made the purchase he asked for butter, but he had not the invoice with him, as he did not think it was necessary. He had no warehouses, and would be surprised to hear that the "butter" came from Scotland, for he certainly was under the impression that it came from Denmark. It was not true that the casks arrived at Newcastle in canvas covers marked "margarine," and that he employed someone to remove those covers. The casks were despatched in the same condition as they were received by him. The Bench retired to consider their verdict, and on returning fined defendant £6 and costs. The case against Hardiman was then proceeded with, Mr. Scott Elder reading a statement which the defendant had made, and which was to the effect that he would plead guilty to the offence. Evidence of a formal description was given by Mr. Simpson, manager, and the Bench said they believed it was

a case in which they should inflict the full penalty. The defendant Hardiman would be fined £20 and the costs. A second charge against the Stores was withdrawn, and Mr. Scott Elder said as the prosecution had an informant in this case, and the Bench had power in the matter, he would ask if they should give a reward to the person who gave the prosecution the information as to this offence. The Bench said they would allow the informant £5. The whole of the fines were paid.

This case throws a sinister light on the methods of Danish "alleged pure butter" swindlers, and on the bunkum of the Danish authorities. We ought to treat Danish butter rogues as that wretched tin-pot country treats English trawlers—give them prison and enormous fines—but there is a sad lack of spirit and regard for English and Irish agriculture about our administrators of the law when it comes to apply it to Denmark. It is time the Danish butter swindle ceased to receive the eulogies of ignorant newspaper editors and the protection of the law.

WATER AT SPIRIT PRICE.

JAMES GOSLING, landlord of the New Inn, Stratfieldsaye, was summoned at Basingstoke, on June 21, for selling whiskey which contained 7.5 per cent of added water to the prejudice of the purchaser.—Mr. F. S. Chandler, who appeared for defendant pleaded guilty, but said defendant had been ill for some time, and a mistake had been made.—The Chairman said they must inflict a penalty of 20s., and costs 22s. 6d., and having regard to the good reputation of the house, the license would not be endorsed.

At Belfast Petty Sessions, William Linacre, Midland Hotel, was charged by Capt. Sandys with selling him half a pint of rum on the 8th April, which on being analysed was found to contain 6 per cent. too much water. Capt. Sandys prosecuted.—Defendant pleaded guilty. The whiskey bought at the same time was found to be correct.—Fined £1 and costs.

At Aberavon Police-court, J. B. Mallin, of the Dock Hotel, Aberavon, was charged with selling rum, the same being under the prescribed strength.—Mr. Jestyn Jeffreys, who appeared for defendant, took an objection to the fact that inasmuch as the defendant had been dismissed in a former court the charge could not again be opened and quoted.—The Bench held that the case had not been gone into and decided to hear the case.—Mr. Jeffreys then took the objection that rum being a perishable article, the lapse of time being 14 days, the case could not be heard. Mr. Evans held that rum was not a perishable article, and held the objection was frivolous.—The Bench decided to hear the case.—Mr. Evans said he was glad to learn the technical objection was over-ruled. It appears that on April 26th. Police-constable Vickery, at the instruction of the Inspector, went to the Dock Hotel and purchased half-pint of rum. The man behind the bar did not want his portion, and a sample was sent to the analyst and found to be 27¼ per cent. under proof. He did not say this was one of the gravest offences, the percentage being only 2¼ per cent. below what was allowed by law, but still in the interests of the public it was his duty to ask that a conviction be entered.—Inspector Macdonald said he visited the Dock Hotel on April 26th. He gave instructions to Police-constable Vickery to enter the hotel to purchase rum. In three minutes he followed and found the constable standing at the counter with a bottle containing a half-pint of rum and a bottle with half-pint of whiskey. The barman, David Howells, was present, when I said it was purchased for the purposes of analysis. He offered to divide it into three parts and offered the barman one of the parts. He said, "I do not want a part, you have it as it was given me by Mr. Mallin on 24th." The bottles were sealed in the presence of the barman and marked 44F, and delivered the same day to the public analyst at Swansea. On May 12th he received the analyst's certi-

cate and also bottle marked 44F. The certificate produced showed the sample was 27 $\frac{1}{4}$ per cent. under proof. Mr. Mallin called on him and said his instrument must have been wrong, and would return it to makers.—Cross-examined: I told Mr. Mallin he would be reported. The bottle produced (an ordinary ginger beer bottle) is the bottle Police-constable Vickery had the rum in. The constable was in plain clothes. He would not say the adulteration was a small one. The whisky was in an ordinary flat bottle. The whisky was 24 $\frac{3}{4}$ per cent. under proof.—Police-constable Vickery said he went to the Dock Hotel on April 28th. The evidence as given by Inspector Macdonald was correct.—Cross-examined: I had the whisky first, and the rum afterwards. The barman said he had not another flat bottle and took a ginger beer bottle from under the counter. He would swear he took it from under the counter. He did not go out to the yard to fetch it. Re-examined: He simply asked for rum.—Mr. Jeffreys said he had a strong case for his client, and he felt sure their worships would dismiss the case. He was instructed that the constable had called at the hotel, and when he would say that the whisky supplied in a flat bottle was actually stronger than allowed by law, but that the bottle supplied by the barman was brought from the yard, and that the dampness in the bottle would be sufficient to lower the strength. This would be proved by Mr. Charles, the analyst, and he would ask the Bench to dismiss, as it would be a serious thing for his client, even though on the face a trivial case if they would convict.—David Howell said he was a manager for Mr. Mallin at the Dock Hotel, and remembered the constable coming to the hotel. The constable asked for a half-pint of whisky, and was supplied with it in an ordinary spirit flask. He then asked for a half-pint of rum, which was supplied in a ginger beer bottle which was brought from the yard.—Cross-examined: I diluted the spirits about a week before. I did not tell the Inspector that the spirits were the same as received from Mr. Mallin. It is untrue that the bottle was brought from under the counter. He did not look to see whether there was any water in the bottle. Could not say whether he turned the bottle upside down or not before putting in rum.—Joseph Brindley Mallin, owner of the Dock Hotel, said Howells informed him that samples had been taken by the Inspector, and he got his hydrometer and tested his spirits, and he found them 24·8 under proof, and that was all right. He then saw the Inspector, and said he had tested and found the spirits were within prescribed strength. He called on an analyst at Swansea, who told him the rum was a little under.—Cross-examined: The spirits were diluted as near 25 per cent. under as possible.—Henry P. Charles, analyst, of Neath, said that a teaspoonful of water would make the difference in strength. It is the usual course for the police to supply their own bottles.—Cross-examined: The man would have his shilling's worth of spirits even if there was water in the bottle.—After a short adjournment the Bench decided that the charge was proved, but owing to the small amount of percentage below selling strength, they would inflict a penalty of 5s. and costs.

At Lymington, Edward Benjamin Joyce, landlord of the King's Arms Inn, St. Thomas Street, Lymington, appeared to a summons for selling gin adulterated with 18 per cent. of added water above the amount allowed by law, 35 per cent. Mr. Lamport defended, and defendant pleaded not guilty. William Edward Robinson, an inspector appointed by the Hants County Council under the Food and Drugs Act, stated on the 9th of May he purchased at defendant's house a pint of gin, and had submitted one part to the County Analyst (Mr. Angel, of Southampton), who by the certificate produced, certified it to be adulterated with water to the extent of 18 per cent. Witness saw no notice in the bar as to the spirits sold there being diluted with water, as shown in the notice produced. He looked for one, but could not see it. The defendant stated he had been assisted in the business by his sisters, who had a share in it, but he had arranged to pay them out. He had cautioned them to obey the law, and not to

adulterate the spirits, but to sell them as received from the brewers. The notice produced had been in the bar since September last, when the house was repainted, etc. Supt. Payne, who had been during the hearing of the case sent to fetch the notice produced, stated he found it as described by defendant over the mantelpiece in the bar. It could be seen from the passage and in the bar. It appeared to have been up for some time. Mr. Lamport contended that the defendant had no adulteration, and that the notice, as posted in the bar, protected him from prosecution, and cited several cases in support of this. The Bench were of the same opinion, and dismissed the case.

At Belper, William Linacre, licensed victualler, was summoned for selling to Captain Sandys, one of the county inspectors under the Food and Drugs Act, one half pint of rum, containing an excess of six per cent. of water. There were 94 parts of rum. The offence was admitted. The fine was a £1 and costs. The Inspector said he purchased whisky at the same time, and it was correct in strength.

MILK.

A Technical Objection.

JOSEPH M. ROBERTSON, of Carlton-grange, Six-mile Bottom, Cambridge, was summoned on June 21st, for selling milk to the Manor Farm Dairy which was deficient of a portion of its natural fat. Inspector Bridge said that on 20th May he went to East Finchley Railway Station, and there met the 12.52 train. He saw two churns of milk delivered on the platform, and after turning the milk out of these churns into empty churns and then back again, so as to mix the contents thoroughly, he took samples from each churn. The churns had on a written warranty that their contents were "pure new milk with all its cream." The samples were submitted to the county analyst, who certified that one sample was "deficient in fat to the extent of 26 per cent.," and the other "to the extent of 31 per cent." Mr. Lane, manager of the Manor Farm Dairy Company, produced a contract with Mr. Robertson to supply so many gallons of milk to this dairy company, the milk to contain not less than 3·75 of fat. In reply to Mr. Bridge, he said that he had had to complain of the quality of the milk supplied before. Inspector Bridge having closed his case, Counsel for the defence took objection that the certificates were not evidence, seeing that the prosecutor had been notified to bring the county analyst himself to Court, that they had done so, but had not called him. There was, therefore, no case against the defendant. The Bench, after some lengthy argument, decided that the objection must be upheld, and dismissed the case. Mr. Glover—Doubtless Mr. Bridge will see that it does not occur again. Mr. Bridge—Oh, but it will happen again. (Laughter.)

At North London on June 22nd, Isabella Parks, of Wellington-place, Pocock-street, Blackfriars, was summoned by Inspector Grist, of the St. Saviour's District Board, for selling milk in Great Guildford-street which was 12 per cent. deficient in fat.—Mr. Topham prosecuted; and Mr. Armstrong defended.—A warranty from a Mr. Gay, of Brandesbury, Micheldever, who sent up the milk, was put in as a defence to the summons, and Mr. Armstrong invited the prosecution to "retire gracefully."—It then appeared that the defendant's nephew had coloured the milk with annatto, and "sweetened" it with an anti-septic powder to keep it fresh. This, of course, disposed of the defence that the milk was sold as received, and the defendant was fined £5 12s. 6d.

MARGARET ELEANOR MORGAN, widow, of Grange-road, Bermondsey, was summoned by Inspector Thomas for selling milk 14 per cent. deficient in fat.—Mr. Ricketts, for the defence, said the defendant sold the milk as she received it. The cows were short of pasturage in May, owing to the cold nights, and therefore yielded milk of poor quality.—Mr. Slade: Has the defendant been convicted before?—Inspector Thomas: Not the widow, but her husband was.—Mr. Ricketts: You can't make her

responsible for what he did.—A penalty of £3 12s. 6d. was imposed.

At Northampton, Walter Stamford (23), 9, Black Lion Hill, was summoned for selling adulterated milk, on the 14th ult. Mr. W. B. Shoosmith prosecuted for the Town Council, and said that the analysis of defendants' milk was the worst that had ever been put in at the Court, for it showed 46 per cent. of added water. George Hurley deposed that on the 14th of May he was selling milk in Harding-street for Ted Standford. Mr. Shoosmith: Is this the man? Witness: No, Sir. Mr. Shoosmith: Who is this man? Witness: Walter Stamford. Mr. Shoosmith: Why did you tell Mr. White it was Walter? Witness: I didn't that I know of. The Magistrates despatched P.C. Page to fetch "Ted" Stamford, who lives at 9, Black Lion Hill, to the Court. "Ted" appeared, and stated that on the 14th of May, the witness Hurley was selling milk for him. Mr. Adnitt said that as the wrong man had been summoned, the case would be dismissed. Walter: Will you allow my expenses, sir? Mr. Shoosmith: I oppose that. Mr. Adnitt: No, the Bench will not allow expenses.

THOMAS DICKS (50), 35, Regent-street, was summoned for selling adulterated milk on the 28th of May last. Mr. W. B. Shoosmith prosecuted for the Town Council. Frank White, Inspector under the Foods and Drugs Act, deposed that an analysis of a pint of new milk purchased from the defendant showed that it contained 18 per cent. of added water. Defendant said that he sold the milk just as he received it. Fined 20s. including costs.

GEORGE A. LEONARD (30), farmer, Great Houghton, was summoned for selling adulterated milk on the 14th of May last. Mr. W. B. Shoosmith prosecuted for the Town Council. The analysis of the milk showed that the milk should have been described as skim instead of new, 25 per cent. of the natural fat having been extracted. Fined 10s. and costs 8s. 6d.

JAMES HUMPHRIES, a dairyman of Sedgeberrow, was summoned under the Food and Drugs Act, for having sold to P.C. Groves, a quantity of new milk which was adulterated to the extent of at least 32 per cent. Defendant did not appear, and the service of the summons was proved by P.C. Merrett. A boy named Arthur Harker, stated that about two o'clock on the afternoon in question, he, at the instruction of P.C. Groves, went to the defendant's shop, and asked defendant's wife if she sold new milk. She replied in the affirmative, and he then asked for a pint to be placed in a bottle which he had with him. This was done, and he handed the bottle to P.C. Groves, who was standing outside the shop at the time. Replying to defendant's wife, witness repeated that he asked particularly for new milk. P.C. Groves stated that upon the bottle being handed him by the boy, he asked him in the presence of defendant's wife what he had purchased, and he replied that it was a pint of new milk. Witness then told defendant's wife that he was a police-officer, and had taken the sample for the purpose of analysis by the County Analyst, and asked her if she wished it divided. She first replied in the negative, and then in the affirmative, and witness went into the house for the purpose of dividing it. Whilst doing this Mrs. Humphries went out of the kitchen, and upon her return she said, "You know you haven't got new milk. I always put scalding water in it. Will you have a pint of the other?" He replied that that was sufficient for him, and then proceeded to divide the milk into three portions, one of which he left with Mrs. Humphries, another he handed to P.S. Yarnold for transmission to the County Analyst, and the other he now produced. P.S. Yarnold spoke to taking one of the samples to the County Analyst and to receiving a report upon it from Mr. Duncan, who stated that in his opinion the sample had been adulterated by the abstraction of fat natural to milk to the extent of at least 32 per cent. His opinion was based upon the fact that the sample only contained 17 per cent. of fat, whereas genuine milk con-

tained at least 2.5 per cent. of fat. Mrs. Humphries, in defence, contended that the boy only asked for milk, and that it was impossible to obtain new milk at that time of day. She had to break the cream to serve him with the milk. Replying to the Bench, however, she admitted that she charged the lad the price of new milk. The Chairman said the Bench would have to impose a fine, though so far as he was concerned, he was sorry to have to do it. He hoped that in future they would not sell milk as new milk if it were not so, for at two o'clock in the daytime it could not be new. The Bench would impose a fine of 10s. including costs.

GOLDEN SYRUP.

At Swindon Police Court, the Bench delivered judgment in the case of Alfred William Maybery, Frank Maybery, and Arnold Maybery, trading as Gibbons & Co., of Bristol, who were summoned under the Merchandise Marks Act for applying a false description to 20 dozen tins of golden syrup, delivered to Messrs. A. D. Williams & Co. of Bridge-street, New Swindon, in the month of April, 1898. (See Food and Sanitation, page 293). The solicitor for the defence when the case last came on for hearing, objected to the summons on the ground that the case should have been instituted under the Food and Drugs Act. The Bench were unanimous in deciding to convict, but refrained from doing so then, and adjourned the case for a fortnight, so that the point of law might be considered. A written judgment was now given, signed by Mr. Hussey-Freke and Mr. Reynolds. They found as a fact that although sold to the public as the "Ambrosia" brand, bearing the impress of the defendants' initials and containing the trade description of Golden Syrup, it consisted, as to three-tenths, of syrup derived from sugar and as to seven-tenths of glucose syrup. Having given full consideration to the case, the magistrates found that defendants applied to the goods in question a false trade description, viz., one that, indirectly at any rate, falsely described both the mode of manufacturing the said goods and the material of which the goods were composed, and this would, *prima facie*, render them liable under the Act. The Bench also found that defendants had failed to satisfy them that they acted without intent to defraud. In concluding, the judgment read as follows:—The adulteration in question is of a serious character. Many tradesmen in this town have been convicted by us in spite of their appeal that they have sold the goods as they received them, and were innocent of fraud. We have punished them for the protection of the public. It is quite true that these defendants are not the manufacturers, but are what are known in the trade as "packers," but they did not satisfy us that their action was such as to give them the benefit of the last Clause in Sub-section 1 of Clause 2 of the Act. The maximum penalty provided by the Act is £20, but we think the justice of the case will be met by the infliction of half the maximum, viz. £10 fine with costs, to be taxed if the solicitors concerned are not able to agree. We are quite willing to state a case, if the defendants so desire, for the consideration of the High Court, and are prepared to postpone judgment 14 days to give them full opportunity of considering an appeal.

LIQUORICE PLUS WORMS.

Mr. E. Mantle, Bishop Auckland, was charged on June 22nd, with refusing to sell a quantity of hard spanish to Mr. Thompson, Food and Drugs Inspector. Mr. Thompson said he ordered two sticks, but defendant would not sell them to him, probably because they were full of live worms, as the Bench would see with the aid of a magnifying glass—Mr. Proud defended, and said his instructions were that it was owing to the bumptious manner of the Inspector that the defendant refused to sell him another stick of spanish.—Defendant was fined 1s. and costs.

COFFEE WITH 60 PER CENT. OF CHICORY.

At West Hartlepool, John Innis, grocer, George Street, was summoned under the Food and Drugs Act for selling adulterated coffee on April 21st. Mr Geipel represented defendant. Mr. Higson Simpson (Town Clerk) prosecuted. Mary Ann Lamb said she went into Mr. Innis' shop for a quarter of a pound of coffee, for which she paid 3d. Outside she met Mr. Wheat, the Inspector, at whose request she had made the purchase, and she subsequently went back into the shop with him. Thomas Wheat, Inspector under the Food and Drugs Act, said defendant's wife admitted selling the coffee to the last witness. He had the coffee examined by an analyst, who ascertained that the article contained 60 per cent. of chicory, and 40 per cent. of coffee. Mr. Geipel, for the defence, said the woman must have known that she could not get pure coffee at the price she paid. The only charge there was against them was that this coffee was wrapped in a paper which did not state that it was a mixture, and this was brought about by Mrs. Innis hurriedly wrapping up the article in the first paper that came to hand, without knowing that by so doing she was committing a breach of the Act. He (Mr. Geipel) submitted that the summons could not apply, as Mr. Wheat was not the purchaser, but if the Bench overruled him on that point, he maintained that coffee sold at the price this was could not have been mistaken for pure coffee. Defendant, on oath, said he had no idea there was 60 per cent. of chicory in the coffee. He bought it ready mixed. By Mr. Higson Simpson: He did not know that he was bound as a shopkeeper to inform the public what he was selling, and had not at the time papers to show that the mixture sold was not pure coffee. Fined 40s. and costs.

DISEASED VEAL.

At the Guildhall, London, on June 27th, James Wm. Porritt, farmer, of Sandbeach Farm, Bradwell-on-Sea, Essex, was summoned before Mr. Alderman Bell, for sending diseased veal for the London market, intending it for sale as human food. The meat was seized by Downes, an inspector of slaughter-houses, and some discussion took place between the chief clerk and Mr. Vickery, the prosecuting solicitor, as to whether under the Public Health Act, any one other than a sanitary inspector had any right to seize in order to make a person liable for depositing. The difficulty, however, was overcome by the words in the Act referring to meat "liable to be seized." A butcher named Underwood said that he dressed the meat by the defendant's instructions, and sent it to London. By the Court: He buried the head and pluck. He would not have sold it in his own shop, as he only sold the best meat. The defendant, in answer to the charge, said that he was unaware that the meat was unfit for food. He trusted entirely to Underwood, who told him emphatically that the meat was good enough. Mr. Alderman Bell acquitted the defendant of any guilty knowledge. The man Underwood was more guilty, and he expressed his opinion by disallowing his costs. Mr. Porritt would have to pay the other costs, as he was technically liable.

BORACIC ACID IN BUTTER.

ELLEN ROGERS, 348, Green Lane, Birmingham, was selling butter containing 91 grains per lb. of boracic acid. Mr. Carter (magistrates' clerk) pointed out that that was more than was necessary to preserve the butter. Inspector Jones: we have never had any before as bad as that. Defendant said she bought it as pure butter, and paid a good price for it. She had spoken to the man she had purchased it from, and he said he would inform the dealer from whom he had bought the butter. Mr. Carter (magistrates' clerk): If we go on we shall get at the right person. The magistrates considered that the defendant was more sinned against than sinning, but imposed a fine of 20s. and costs.

SPURIOUS DEMERARA SUGAR.

At Merthyr, an adjourned case was heard, in which Messrs. Andrew Buchan and Co. were summoned for selling sugar not of the nature, substance, or quality demanded by the purchaser. Mr. D. W. Jones defended. Police-sergeant Gammon, an inspector under the Food and Drugs Act, repeated the evidence given at the first hearing, showing that on the 3rd of May he purchased 1lb. of Demerara sugar at the company's shop at Brithdir, for which he paid 1½d., and a sample of which he sent to Mr. Seyler, the county analyst. Mr. Seyler, who was now in personal attendance, said that the sample analysed by him proved to be composed entirely of crystals dyed with some aniline dye. The Stipendiary: What were they? Witness: Sugar crystals.—It was sugar? Oh, yes. Was it Demerara sugar? No.—Beet sugar? I can't say. In cross-examination by Mr. D. W. Jones, witness said that the dye was not injurious to health, but the sugar was not equal in quality to Demerara. Mr. D. W. Jones submitted that there was no proof of any prejudice to the purchaser, the sugar, although not Demerara, being perfectly pure, and called Mr. David Jones, the company's general manager, who stated that the sugar sold to the sergeant, was sold at less than cost price, and that it would have paid them better to have supplied the ordinary brown sugar, usually described as Demerara. Mr. William Jones, the manager of the Brithdir shop, explained that he received the sugar already put up in packets, and said that he sold the packet to the officer, believing it to contain Demerara. The Stipendiary said there was no doubt an offence had been committed, for Demerara sugar was superior to dyed crystals, and the Bench imposed a fine of £1 and costs, and allowed a fee of one guinea to the analyst.

ADULTERATED COFFEE.

At Birmingham on June 28th, Harriet Jackson, Mole Street, was fined 5s. and costs for selling coffee containing 60 per cent. of chicory. The defendant pleaded that she was a widow, and erred in ignorance.

ADULTERATED ALMOND OIL.

At Birmingham on June 28th, Frank Henry Frosser, Spring Hill, was fined 20s. and costs for selling almond oil containing 75 per cent. of peach-kernel oil; and Arthur Tylor, Balsall Heath Road, was fined a similar amount for selling almond oil containing 50 per cent. of peach-kernel oil.

SUSPICIONS ABOUT MARGARINE.

MR. EDWARD HILL writes for some years at the county asylum near Wells, in the dietary one ounce of margarine daily has been given to the patients in lieu of butter.

As a member of the County Council and the Asylum Committee, I considered the death-rate was heavy; and from information obtained from the superintendents of the asylums in the three neighbouring counties—White, Dorset, and Hants—where I find the patients have sound butter, I discover the death-rate during the last four years is 30 per cent. less than at Wells.

A new asylum was opened near Taunton about two years ago, and for the first thirteen and a half months, with 305 patients having butter, the deaths were only 11; but for economy's sake margarine was substituted, and the deaths in nine months, with 452 patients, have run up to twenty-two. So here is a surprising increase.

I do not wish to imply margarine is hastening the deaths of these poor creatures, but I do think it is a subject which should be inquired into. I should observe on these facts being shown, the Asylum Committee have decided on having butter, and perhaps the Minister of Agriculture, the chairman of the Food Adulteration Committee—Mr. Long—may not be so infatuated with margarine.

PRACTICAL LESSONS DERIVED FROM 14,000 SAMPLES TAKEN FOR ANALYSIS UNDER THE "SALE OF FOOD & DRUGS ACTS."

By J. R. KAYE, M.D., Medical Officer of Health, West
Riding of Yorkshire.

THE subject of adulteration, is one which, in spite of other engrossing questions, is exciting an unusual amount of attention in this and other countries, and naturally so. The remedy looked for against the evils of adulteration is in the interest alike of the producer and consumer, of the public health and general good of the community, of common honesty, and in the interest of trade. It is opportune, therefore, to devote half an hour or so to a subject which so closely concerns ourselves.

HISTORICAL REVIEW.

Let us, first of all, look very cursorily at the history of the question.

Adulteration is a very ancient practice being probably resorted to in a crude way soon after communities began to barter their various commodities. Ancient records seem principally to deal with the adulteration of wines and we learn that at Athens they appointed a special inspector to prevent this. Pliny mentions that certain bakers are addicted to adulterating their bread with a soft, sweet, white earth. Coming to our own country and to more recent times, we find heavy penalties were imposed on adulteration in the last century, but only with regard to special taxed articles where adulteration meant a loss of revenue to the state. For instance, in 1724 an Act was passed with a fixed penalty of £100 against any traders who mixed with coffee such articles as burnt peas, beans, and vegetable matters which did not pay excise.

The first real progress in the way of protecting the public health from adulterated foods, etc., seems to have been due to the action of the late Dr. Thomas Wakley, Editor of the "Lancet," who in 1850 instituted an inquiry into the various articles of diet, and proceeded to "pillory," a la Labouchere, the offending dealers by publishing their names on a sort of black list. A few years later, in 1855, a Select Committee of Parliament commenced its labours and investigated the effect and extent of adulteration as regards both the revenue and the public health, and upon the report of that Committee the first general Adulteration Act was passed in 1860. This Act provided for the appointment of analysts, and aimed at preventing noxious or injurious adulteration. In 1872 another Act was passed extending the restriction to ordinary adulteration and empowering inspectors of nuisances to purchase samples.

In 1874 another Select Committee was appointed, and as the result of its work tea was thence examined on importation, and the Act of 1875 was passed which holds good to-day.

As many as you know, the Law of Adulteration is once more engaging the attention of the Legislature. In 1894-5-6 a Select Committee inquired into the working of the Acts, and presented a report containing many valuable recommendations. As a result it is probable that this Session will see a new Food and Drugs Law enacted.

PRESENT LAW, ETC.

The present law on the subject, and the Acts which Inspectors are called upon to administer are:—

- The Sale of Food and Drugs Act, 1875, and the Amending Acts of 1879,
- The Margarine Act, 1887.

Although these Acts define quite a number of statutory offences, it may be stated that the principal ones with which we have to deal are the following:—

Nature of Offence.	Example.	Section.	Penalty.
1. Adulteration of Food so as to be injurious to health.	Poisonous colouring matter, etc.	3	1st offence up to £50. Subsequent offence is a misdemeanour punishable with six months' hard labour.
2. Adulteration of Food or Drugs so be prejudicial to the purchaser, i.e., not proper nature, substance and quality.	Water in milk, chicory in coffee, and the great majority of offences come under this section.	6	Fine up to £20. No increased limit for subsequent offences.
3. Abstraction of a part of a food so as to injuriously affect its quality.	Rem'val of cream from milk, etc.	9	Ditto.
4. Exposing or selling margarine without a proper label or wrapper.	—	Sec. 6 of 1887 Act.	1st offence up to £20 2nd „ £50 3rd „ £100

In addition to the above there are other offences, such as refusing to sell to the Inspector, giving false warranty, etc.; but we need not go into those here, as they will rarely be encountered.

APPOINTMENT OF INSPECTORS.

Before going further, it may be well to remove some misconception which I find exists occasionally as to the precise authority for taking samples. Sanitary Inspectors are not officers under these Acts simply by virtue of their appointment as "Inspector of Nuisances," though there is no doubt that every Sanitary Inspector ought to be in a position to give his attention to this important work. Sanitary Inspectors, when appointed or subsequently, should see that the resolution of their Sanitary Authority includes the execution of these Acts, and they should be provided with a certificate of such appointment either signed by the Clerk or under the Seal of the Council. This being once procured, an Inspector is at liberty to purchase samples when and where he sees fit (within his district), and without obtaining further special instruction at any time.

The special Inspectors of the County Council and the Police Superintendents have power to purchase samples in most of the sanitary districts in the Riding; but this is no hindrance to local action by the Sanitary Inspector.

Another misconception sometimes exists in confusing this work with the powers of Inspectors under sections 116-119 of the Public Health Act, 1875, relating to unsound meat, etc. There is no connection between the two. The Public Health Act deals with unwholesome food and has nothing to do with adulteration. The Food and Drugs Acts, on the other hand, deal with adulteration, and have nothing to do with food unfit for consumption by reason of its condition as to soundness, etc.

METHOD OF PURCHASING.

Great care is necessary in purchasing samples, in order that the case may not subsequently break down for want of compliance with the proper procedure.

- (1) Ask clearly for the article required, and receive it from the vendor.
- (2) Pay the price demanded, and receive the change.
- (3) Then forthwith say: I have purchased this (butter) as an Inspector under the Sale of Food and Drugs Acts, and hereby notify to you my intention to have it analysed by the Public Analyst, and I offer to now divide it into three parts, and deliver to you one of the parts. Is it your desire that I should so divide it?"

Take care to say "Public Analyst." Do not allow the vendor to snatch the article back after purchase is complete.

- (4) If the vendor elects to have it divided, proceed to divide it into three parts (not necessarily equal, but fairly so), and after properly securing and sealing each part, hand one to the vendor and leave the shop with the other two.
- (5) Despatch one portion (or the whole if the sample was not divided) to the public analyst without delay. If the analyst's place is within two miles take it by hand personally. If not, send it by Registered PARCEL Post. (The Act, section 16, says Registered Letter Post, but subsequent regulations of the Postmaster General have specified Registered PARCEL as the proper medium of transit.
- (6) The Public Analyst does not require to know the whole of the circumstances, such as name of vendor and price paid. All that need appear on the package is—the seal and name of the Inspector, the name of the article asked for and a distinctive number or mark, corresponding with the mark in the Inspector's register or note book.
- (7) If the sample was divided, the Inspector must retain one of the three portions for production if the case should go to court afterwards. This should at once be placed under lock and key at the Inspector's office, where no one can tamper with it.

An Inspector may arrange with a deputy—any intelligent man, woman, or child, to enter the shop and ask for the article, receive it, and actually pay for it. Then the Inspector walks in, takes the article from his deputy, makes the formal announcement to the vendor, offers to divide, and proceeds as in ordinary cases.

Another important provision (Section 3 of the Amending Act of 1879) enables the Inspector to procure samples of milk from the bulk in course of delivery, say by a contracting farmer to the town purveyor or customer. The section requires the sample to be taken "at the place of delivery;" that means, at the railway station, where the purveyor received the cans, or at the place where the farmer's carts deposit the bulk in the hands of the consignee or his agent. The provision is, I am afraid, largely a dead letter, and Inspectors will do well to study the whole ground before attempting to carry it out. This section does not require the Inspector to pay for the sample he takes, or to offer to divide it into three parts.

INSPECTORS' OUTFIT.

It is clear that in order to carry out these detailed duties with precision and without undue annoyance to the shopkeeper, Inspectors must be supplied with all necessary articles before setting out sampling. I have brought with me specimens of the following articles, which will be handed round the audience:—

- (1) Bottles for receiving and dividing liquid samples, such as milk, spirits, etc. These should be perfectly dry inside and have sound corks.)
- (2) Tins (with lever lids) for the reception of lard, butter, margarine, etc. Paper absorbs the grease and water, and is unsatisfactory.)
- (3) Gummed labels for attaching to the samples. A good plan is to have a note-book made in such a way that a leaf is used for each sample, allowing three labels to be torn off and leaving a counterfoil in the Inspector's possession. (See specimen leaves handed round.)
- (4) Large, strong envelopes in which to enclose such bottles or tins for sealing. (This is better than sealing the bottle or tin itself.)
- (4a) Smaller ditto ; for little packages, e.g., pepper, etc.
- (5) Official distinctive seal, and good sealing wax and lights.
- (6) A certificate of appointment, in case vendor demands authority.

Besides the above, the Inspector will require AT HIS OFFICE :—

- (1) A large official register into which to enter all the details of the sample from his note-book, with columns for result of analysis and proceedings to be entered up later.
- (2) A copy of the Acts (costing a few pence).

LEGAL PROCEEDINGS.

When the certificate comes to hand it should be studied at once, and if it shows that any offence has been committed, proceedings should be taken without delay. The clerk to the Sanitary Authority would instruct as to the manner of laying the information, or if you produce the certificate to the magistrate's clerk he would probably see that the summons is made out in correct form.

It is not necessary for an officer to get the permission of his Authority before taking legal proceedings. The Inspector becomes the plaintiff or informant under the Act, not the Sanitary Act, and the Act gives him power to prosecute. To wait until the meeting of the District Council before taking action would often invalidate proceedings, as, in the case of perishable articles, e.g., milk, butter, etc., information must be laid within 28 days of the purchase. Delay also allows the vendor to approach the Sanitary Authority in mitigation of his offence, and they are inclined to listen to excuses which should be made to the proper persons, namely, the Justices.

GOOD EFFECTS OF SAMPLING.

Before proceeding to consider what particular class of articles should be submitted for analysis, we may accept it as proved that a close connection exists between the extent of adulteration and the number of articles submitted for analysis ; and the surest way to reduce the prevalence of fraudulent practices of adulteration is to take greater numbers of sample for analysis.

The following table illustrates this statement :—

Year.	County.	No. of persons relatively to each sample taken.	Percentage of Adulterated Samples in those taken.
1890	Somersetshire.....	379	3.6
"	Gloucestershire.....	770	6.2
"	Bedfordshire.....	821	7.1
"	Derbyshire.....	3164	17.1
"	Oxfordshire.....	14963	41.7

The same fact is borne out by the following figures for 1897 :—

	No. of persons per sample.	Percentage of Adulterated Samples in those taken.
England and Wales.....	617	9.3
West Riding County Council Area	501	3.4
Boroughs in West Riding having their own Analyst.....	1084	9.4

(To be continued next week.)

THE TOMATO AS A TONIC.

ACCORDING to the *North American Practitioner* (February, 1899), Dr. True, of Philadelphia, has made quite extensive experiments with the juice of the red tomato, for the purpose of discovering its virtues as a medicine. Dr. True's investigations have led him to adopt the juice of the tomato in cases in which the blood needs toning up. The United States Government and the German Government have also made experiments, and many facts of interest have been discovered. During the recent war with Spain the juice of the tomato was utilized extensively as a health preservative among certain bodies of troops, with results which were eminently satisfactory.

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Food and Sanitation.

SATURDAY, JULY 8, 1899.

SPECIAL NOTICE.

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LONDON, E.C.

WHAT TO DO WITH PUBLICANS WHO RUN THE DILUTION NOTICE SWINDLE.

THE new Adulteration Act, does not propose to do anything to stop the widespread and impudent swindle publicans practice of selling spirits diluted with water in excess of the quantity allowed by the Act, and shielding themselves from punishment of their roguery by exhibiting

a notice stating that "all spirits sold in this bar are diluted." Of course no really honest publican would resort to so wretched a plan of swindling the public, and the exhibition of such a notice to cover fraud is in itself *prima facie* evidence that the publican is not a fit and proper person to be entrusted with a license.

Last year, some of our readers recognising this, and how grossly unfair was the swindle upon the public and honest traders, determined that they would oppose renewals of licences to all persons who shielded themselves from prosecution for fraud by exhibiting the dilution notices. The result was in every way admirable.

AT Steyning Brewster Sessions, in August last, Superintendent Hooker, of the West Sussex Constabulary, reported that three publicans had been summoned for selling adulterated spirits, and all were convicted and fined. *No notices as to the dilution of spirits were exhibited in any of the houses now.*

AT Oxford licensing sessions, the Mayor, Alderman Gray, said in the opinion of the magistrates a display of the notice was an infringement of the Food and Drugs Act (unfortunately L. C. J. Cockburn's decision favoured it), and they hoped no one holding a license in the city would in future exhibit such a notice.

In other places renewals of licenses were granted on the condition that the swindling notices were no longer to be exhibited.

It is thus that our readers can suppress this fraud. Every local authority should cause notices of objection to the renewal of the license to be served on every publican exhibiting the dilution notice, unless an undertaking be given to discontinue the practice. We trust this course will be adopted throughout the whole of the United Kingdom.

MILK OF SULPHUR ADULTERATION.

AT Bridlington, a shop assistant to Messrs. Hardwick and Sons, Promenade and Quay-road, was summoned for an offence under the Food and Drugs Act. Mr. F. J. Brigham appeared for the defence. Supt. Cooper proved that he went into the shop kept by defendant's employers, Quay-road, and asked the defendant if they kept milk of sulphur, and he said they did. Witness asked for a quarter of a pound, for which he paid 2d., and divided it into three parts, one of which he gave to the defendant, one he sent to the county analyst (Mr. Baynes, of Hull) and the other he kept and produced. P.C. Robson was present at the time, and gave corroborative evidence as to the purchase. The analysis showed that there was 54.72 of sulphate of lime in the article purchased. Defendant said that they kept just a little milk of sulphur for convenience. He admitted that he weighed four ounces, but swore that the superintendent asked for it to be divided into two parts. Mr. Brigham, for the defence, described the action of the police as a legal trap set for a young man, and denied that the superintendent was prejudiced by the purchase. The trap was not baited according to law, as the paper in which the article was wrapped showed that it was purchased of John Hardwick, and therefore the defendant was not liable. The Bench said it was a serious adulteration. The test was of the simplest description, because if the sulphur was pure it would burn and there would be nothing left; if adulterated it was most injurious to the consumer. They would fine the defendant £5 and costs. Mr. Brigham pleaded for mitigation, but the Bench would not alter their decision.

GOLDEN SYRUP ADULTERATION.

At Glasgow on June 27th, Sheriff Boyd had before him three cases under the Food and Drugs Act relative to the constitution of "golden syrup." The prosecutions were important, as being the first of the kind in Glasgow.

The first case was that of David Miller, grocer, 460, Gairbraid-street, who was charged with having, on the 10th May, sold a 2lb. tin of "golden syrup" which was not of the quality demanded in so far as it contained 79 per cent. of starch glucose syrup. An agent for accused explained that glucose was a syrup made from maize or wheat, the object of its use being to liquify and clarify. If glucose were not used, some chemicals would have to be employed, and these might be detrimental, while the result of an enquiry in America showed that glucose was perfectly harmless. The respondent had purchased the syrup in the ordinary way, as he had been doing for years, and it never occurred to him that anything like a guarantee was necessary. The manufacturers of this particular syrup immediately after the first prosecution took steps to have their position assured, and sent out to the wholesale houses a circular explaining that the syrup contained other elements than the products of pure cane sugar. Mr. Neilson, who prosecuted, explained that originally golden syrup was a treacle, and a bye product of pure cane sugar. In consequence of the introduction of beetroot new processes had come into vogue, and there had been found a glucose which was not made from pure cane but from starch, this latter costing about half the price of the product of cane. The position of the prosecution was that glucose was unnecessary, and a foreign ingredient. His Lordship imposed a fine of £1 with expenses, adding a warning that succeeding penalties would be much higher.

The same penalty was imposed in the case of Thomas Charles, grocer, 861, New City-road, who admitted having sold a tin of "golden syrup" which contained 78 per cent. of starch glucose syrup.

Mr. John Dunlop, trading as Robert Peden & Company, 168, Sauchichall-street, pleaded not guilty to a charge of selling a tin of "golden syrup" which contained 20 per cent. of starch glucose. Mr. Letham, for the defence, stated that the manufacturers—the "Globe" Company, of Greenock—wished to defend the case on its merits, the defence being to the effect that the ingredients other than pure cane were required for the preparation or production of the article. Mr. R. R. Tatleek, one of the witnesses for the prosecution, stated that glucose was not necessary in the production of golden syrup, and that there were golden syrups manufactured where glucose was not used. For the defence, Dr. Henderson, professor of chemistry in the Technical College, expressed the opinion that syrup made from pure cane sugar would crystallise, but that the addition of glucose in sufficient quantities would prevent this. Mr. Letham, in summing up, emphasised the fact that in England manufacturers of syrup were allowed to sell it containing 20 per cent. of glucose, and he urged that it would tell very much against the Globe Sugar Company if, after doing all they could to foster this branch of the sugar industry—an industry that of recent years had been very much depressed—they should not be placed on the same footing as the English manufacturers. His Lordship said it had been clearly set forth that the complainer asked for golden syrup, and had got an article which was adulterated to the extent of 20 per cent. He considered that it had not been proved that such adulteration was necessary, the bulk of the evidence indeed going to shew what a proper preparation of inert sugar was the best way to prevent crystallisation. As to the injury the decision might do the trade, that was a matter which his Lordship could not take any cognisance of, and he thought the honest course for the trade to pursue was to place upon the label not "Pure Cane Sugar Golden Syrup" but what it really was, "cane sugar, golden syrup, and glucose." The penalty would be £1 with expenses. Mr. Letham pointed out that the Globe Company had issued a circular to their customers stating that a percentage of glucose was

used and requesting that they should apply to the company for labels to place upon the tins. His Lordship said he did not reflect upon anybody, but merely said that the proper and honest course to pursue, and one that would keep the sellers right, would be to place upon the tins such a label as he had suggested.

WATER AT SPIRIT PRICE.

At Arundel, on June 27th, George Pelham, landlord of the Ship and Anchor Inn, Littlehampton, was summoned for selling brandy which was adulterated with 12.8 parts of added water. Defendant was represented by Mr. E. B. Wannop, who put in a plea of not guilty, intimating that he should probably, with the consent of the Bench, alter it to one of guilty later. Alfred Dean, son of P.C. Dean, of Wick, stated that on May 19th he purchased half-a-pint of brandy from George Pelham, of the Ship and Anchor Inn, Littlehampton. He paid 2s. for it, and delivered it to Sergeant Webling. Sergeant Webling stated that on May 19th, shortly before eleven, he received half-a-pint of brandy from the last witness at the door of the Ship and Anchor Inn, River Road, Littlehampton. He saw the defendant inside the house and told him that he had caused the brandy to be bought at the direction of the Chief Constable for the purpose of being analysed. Defendant said "You will find that all right. There it is, just as I get it. If you had asked for a pint you could not have had it, because I sell very little of it." At defendant's request, and in his presence, witness divided the brandy into three bottles, corked and sealed them. He handed one to defendant and sent another to the public analyst for Sussex. The certificate showed that there were 12.8 parts added water. Mr. Pelham afterwards told witness that he was not surprised at the result of the analysis. A party had come in just before closing time one day and asked for three penny-worth of brandy. At the customer's request he diluted it with water. The person then said, "I, forgot, I wanted whisky." He put the brandy aside, and afterwards, unthinkingly, emptied it back into the bottle. Questioned by Mr. Wannop, Sergeant Webling said he should think there was about a gill of brandy left in the bottle from which defendant took the half pint. Mr. Wannop now withdrew the plea of not guilty, and admitted the offence. He pointed out that although he knew the explanation given the Sergeant by the defendant, was no palliation, yet it was, to a certain extent satisfactory, inasmuch as it showed that the brandy got adulterated by a pure mistake. His client only kept the liquor for medicinal purposes. Asked by Mr. Wannop to tell the Bench the character of Pelham, Superintendent Kennett said he took the Ship and Anchor Inn with an excellent character, and he had certainly conducted the house better than it had previously been conducted. Defendant sold but very little brandy. The Bench accepted the explanation that the offence was committed by mistake, and said they would only impose a fine of 8s. 6d., and the costs, 11s. 6d.

At Clerkenwell, on June 28th, Edward Carmack, of the Montrose public house, St. James's Road, Holloway, was summoned, at the instance of the Islington Vestry, for selling, on the 25th April, whiskey 31.3 degrees under proof. Mr. Bramall prosecuted, and Mr. A. J. Ford defended. Inspector Preston, of the Islington Vestry, proved the purchase of a quarter of Scotch whiskey, for which he paid 7d., and which he duly conveyed to the public analyst. Dr. Teed, the analyst, proved receiving the whiskey from the last witness. On analysts, it was 31.3 degrees under proof. Cross-examined: It was 6.3 degrees below the 25 under proof allowed by law. There was always an amount of evaporation going on in spirits immediately they were exposed, but not sufficiently to account for this result. He had heard of "obscuration" in spirits. Mr. Horace Smith remarked that he had only heard of obscuration as applied to an eclipse of the sun. (Laughter.) Mr. Ford: This is an eclipse of the whiskey.

We shall get more enlightened as we get on. Dr. Teed (cross-examination continued) did not think that the addition of a little sweetening matter, to suit the public taste, would cause obscurity. For the defence, Mr. Stokes, F.C.S., public analyst of St. Luke's and other districts, was called, and said he preferred the process of distillation in analysing spirits. Mr. Bramall said Mr. Stokes, he understood, had arrived at the same result, and he thought the case might be shortened. Mr. Ford said they found the dilution 6 per cent., but the defendant had put nothing more in his whiskey than a little sugar. Mr. Bramall said there was a previous offence in this case. Mr. Ford said that was the act of his servant. Mr. Horace Smith imposed a fine of £3, with 2s. 6d. costs.

MARGARINE AT BUTTER PRICE.

At Belfast, on June 23rd, the adjourned cases against Patrick Quinn, 68, Vicarage Street, and James Quinn, attendant, brought up at the instance of inspector M'Master for selling margarine as butter, the same not being labelled, were heard. At the same time summonses were also heard which were brought by Patrick Quinn, 68, Vicarage Street, against Daniel Orr, 54, Mill Street, for selling to the complainant margarine as butter on the 3rd May, and on a second count for selling the substance without its being duly labelled. Mr. Lewis prosecuted, Mr. Harper represented Patrick Quinn, and Mr. Tugan appeared for Daniel Orr. Mr. Harper said his client had been summoned under the Margarine Act and under the Food and Drugs Act by the Corporation, and the case was being tried before Mr. Hodder on that day fortnight. His defence was that they purchased the goods from a person named Orr, and that they purchased them with a warranty as set forth in the Act of Parliament. Mr. Holder adjourned the case under conditions that he would summons the other party, Mr. Orr, which he had done, and it was in that way that the case came before them. The Act of Parliament left it open to a party who had been summoned to show that he had bought the goods and sold them as he bought them; that he bought them with a warranty, and it had been decided that the invoice was a warranty. He had followed out the Act of Parliament as accurately as he possibly could. Mr. Tugan contended that, according to section 10 of the Food and Drugs Act, 1879, with regard to the limitation of time for the summonses to be brought under the provisions of that Act, his client, Quinn, stood in the same position as Inspector M'Master. Mr. Harper said he agreed with his friend in his proposition that if his client were in the position as the inspector this prosecution would require to be brought within twenty-eight days, but he disagreed with him entirely in his second position—namely, that his (Mr. Harper's) client stood in the same position as the inspector. After legal argument and hearing of evidence, the magistrates convicted Orr on both summonses. As the defendant had been previously convicted on an occasion, when he was fined £3, they imposed the heavier penalty of £10 and 20s. costs on the summons for selling without a label, the other count being ruled in. The summonses against defendants Quinn were dismissed.

RIDICULOUS FINES AT SHEFFIELD.

AMOS PAYLING, cowkeeper, of Greenland Farm, Sheffield, was charged with selling adulterated milk, on June 28th. Inspector Duro took a pennyworth of milk from defendant's boy, which was analysed and found to contain 9½ parts per cent. of added water. Defendant said he had been a cowkeeper for 20 years, and this was the first complaint he had had, though samples of his milk had several times been taken by the inspectors. He could not account for the addition of water. Mr. Belk said it was not a bad case, and the fine would be 10s., including costs.

GEORGE TAYLOR, milk dealer, of 350, Attercliffe Common, was also charged with selling adulterated milk. The

sample taken was found to contain eight parts per cent. of added water. Mr. Collingwood pointed out that the analyst took as his standard the very poorest quality of poor milk, and that therefore 8 per cent. of added water was a more serious matter than their Worshipships appeared to think. Mr. Belk said it would be a good thing if the public analyst were occasionally brought into court to state that fact. Mr. Collingwood said the suggestion should be acted upon in the very next case. He would also point out that if milk was adulterated to the extent of 8 parts of added water, the seller would make 12½ per cent. profit in excess of what he would get on the sale of pure milk. Defendant was fined 10s., including costs. Such penalties are absurd and direct incentives to fraud.

THE INSPECTION OF MEAT IN LIVERPOOL.

At the last monthly meeting of the Liverpool City Council, Mr. R. E. W. Stephenson called attention to the proposed appointment of a meat inspector. He objected to the appointment on the ground that the person in question was not qualified to fulfil the duties of the position, which required a person of vast practical experience in regard to the inspection of meat. He proposed that the matter be referred back to the committee for further consideration. Mr. W. Roberts seconded the amendment. Alderman Menlove, replying to a discussion, said that the duties of the office in question would principally be the inspection of shippens and cattle, and not the inspection of meat. A vote was taken, and the amendment was lost by 38 to 26 votes, the general proceedings of the committee then being confirmed.

PRACTICAL LESSONS DERIVED FROM 14,000 SAMPLES TAKEN FOR ANALYSIS UNDER THE "SALE OF FOOD & DRUGS ACTS."

By J. R. KAYE, M.D., Medical Officer of Health, West Riding of Yorkshire.

(Continued from p. 322).

WHAT TO BUY.

Let us now consider the important question of what kind of samples to submit for analysis, because much time and labour may be wasted by injudicious sampling. At one time sophistication or defilement of food products was so rampant in some places that one could seldom miss an adulterated article. It is recorded that a French analyst some time ago amused himself by constructing a menu of the dinner of one who, greatly daring, would dine at a cheap restaurant in Paris. The exact items do not matter, but the general idea was that the diner, after swallowing soup made from a meat extract preserved by the addition of boric acid, was regaled with fish, preserved from putrefaction by the same means; that his vegetables had been preserved in a bottle, and given, by the addition of copper, a bright green colour, which produced a delusive appearance of freshness; that his sweets were from fruit preserved in a solution of salicylic acid; that he ate with his cheese (which itself was loaded with mutton fat, or cotton seed oil) margarine spread on bread whitened with alum and made from flour to which plaster of Paris had been added to give weight in the scales. These delectable viands were washed down with a plastered wine coloured with fuchsin, and the liqueur with which he hoped to correct the evil effects of the rest was made of crude spirit sweetened with beetroot sugar and flavoured with a coal-tar product, while the accompanying cup of coffee was composed probably of some part of chicory, turnips, parsnips, carrots, dandelion, acorns, horse chestnuts, hazel nuts, figs, prunes, couch grass, almonds, walnuts, pea nuts, dates, apples, pears, as all these substances (generally in a damaged condition) are mixed together, ground and roasted, and mixed with a little real coffee to form GROUND coffee. (This narrative, let me add, is not American, but from France.)

It will be a useful rule to apply, that those articles which are most adulterated and in most frequent use, should receive most attention from Inspectors. In the area under the control of the West Riding County Council, I find that during the ten years (1889-98) there were analysed no less than 14,146 samples, consisting of the following kinds, of which 1,128 were returned as adulterated.

Samples taken within the jurisdiction of the West Riding County Council, during 10 years (1889-1898).

Milk	...	...	...	3588
Bread	...	...	...	102
Flour	...	...	...	184
Butter	...	...	...	2179
Coffee	...	...	...	638
Sugar	...	...	...	116
Mustard	...	...	...	77
Confectionery and jam	...	...	...	84
Pepper	...	...	...	348
Tea	...	...	...	71
Lard	...	...	...	1141
Wine	...	...	...	4
Beer	...	...	...	2
Spirits	...	...	...	2402
Drugs	...	...	...	1365
Other articles	...	...	...	1845
Total	...	...	...	14146

The following table shows the average per centage of adulterated samples among the various articles purchased during five years :—

Number of Samples found Adulterated, per cent.
(Average of five years, 1893-97).

	England and Wales.	Boroughs in the West Riding.	West Riding County Council.
Milk	11.7	6.8	4.0
Butter	10.1	13.2	3.6
Coffee	10.1	16.0	10.4
Lard	3.4	4.7	0.9
Spirits	16.8	23.7	20.1
Drugs	11.0	12.8	12.1
All articles	10.0	8.7	7.7

MILK.

Milk is at once the article of food which is most frequently adulterated or “baptised,” and which it is most desirable should be kept pure and good. Unfortunately, the application of the Acts to milk is beset with difficulties owing to the absence of any legal standard, and the difficulty of distinguishing (or rather getting the Court to distinguish) between water that is natural to the milk and water which has been fraudently added. For want of a legalised standard of milk, analysts are often compelled to class samples as “doubtful” or “inferior” which they are morally certain have suffered some dilution with water. Bearing this in mind, the following figures help us to realise what an enormous quantity of milk is sold which only just passes muster, and ought really to be condemned in many instances.

Average Results of five years, 1893-97 (W.R.C.C.).

	Percentage reported Genuine.	Percentage reported Adulterated.	Percentage classed as “inferior” or “doubtful.”
Milk Supplies	80.5	4.3	15.2
All other kinds	87.1	8.3	4.6

Nevertheless, much good can be accomplished by keeping the milk supply under supervision, and if you will follow me into a few figures, you will see that there is

great inducement to purchases samples of milk frequently for analysts :—

West Riding County Council—Jurisdiction for Food and Drugs.
(Population, 1,220,583.)

Year.	No. of Milk Samples analysed by West Riding County Council.	Percentage found adulterated.
1893	232	6.5
1894	392	6.1
1895	351	4.0
1896	589	3.2
1897	685	2.5

It will be observed from the above that in 1893 no less than 6.5 per cent. of the milk was adulterated, the figures in the last column gradually diminish until in 1897, by dint of our Inspectors having each year taken more and more samples for analysis, we had reduced the proportion of adulterated samples to 2.5 per cent. of the total milk purchased.

Now, if we may legitimately assume (and I think we may) that these proportions represent approximately the extent to which adulteration of milk is practised in the West Riding—and if we may claim as shown in the above table that the milk sold is purer than five years ago, we may congratulate ourselves on having done good work for the community—especially for the poorer classes and the little children to whom good milk is a very important item.

And if we turn from the moral to the financial aspect of these figures it becomes abundantly clear that money spent in the administration of these Acts produces an immediate and increasing profit to the ratepayers, while, on the other hand, these figures illustrate emphatically that adulteration is an iniquitous system, demanding from the public not its money or its life, but, I venture to say, its money and its life.

A simple calculation shows that the inhabitants of the area to which the above figures relate must spend not less than £2,500 a day on milk, equal to the enormous sum of £912,500 per annum. But in the year 1893 we have seen 6.5 per cent. of this sum was laid out in milk which was adulterated, and if we take the average rate of adulteration at 10 per cent. of added water, it follows that during the year the people paid no less than £5,930 for water which was sold as milk. Coming to the year 1897 we find the proportion adulterated had fallen to 2.5 per cent., and if we apply the same calculation, we find that in this year the amount paid for water was only £2,281—still an astonishing sum.

Unfortunately, we still have to pay for water sold as milk, but we may claim (as shown by these figures) to have effected a saving of £3,649 per annum—money which, five years ago, was worse than wasted.

Now let us see at what cost this has been accomplished. In 1897 the number of milks analysed was 685, and the total cost per sample, including salaries, fees, and all expenses, could not be more than 10s. 6d. each, or say £350 for the lot. So that every sample of milk purchased for analysis has clearly saved the public ten times the cost incurred in connection with its analysis.

Whenever you are in doubt as to what kind of sample to purchase, settle on milk. It is always well to ask for “new milk.”

It may be said that milk is largely affected by season, so that in every dry parts of the year the yield is small and not so rich. But while a little leniency may be allowed in the interpretation of results at this season, it is not desirable to cease purchasing samples; for the temptation to water the milk is always greater just when the milk is least able to stand dilution.

BUTTER.

Average Adulteration, 5 years (1893-97) :—

England and Wales	...	...	10.1
West Riding C.C.	...	...	3.6
Boroughs	...	...	13.2

There is no doubt that an immense amount of margarine is sold as butter, or mixed with it. The practice which appears to have increased recently in the Boroughs often amounts almost to downright robbery, and Inspectors should vigorously enforce the Margarine Act besides purchasing plenty of butter samples.

It is well, also, to ask for margarine with the object of seeing whether it is served in a printed wrapper, according to law. If it is so served there is no need to spend money on its analysis, but if the wrapper is omitted, the Inspector should proceed in the ordinary way, offering to divide, etc., and sending portion for analysis, as it will be necessary to prove the article actually was margarine as asked for.

COFFEE.

Average adulteration, 5 years (1893-97) :—

England and Wales	...	...	10.1
West Riding C.C.	...	...	10.4
Boroughs	...	...	16.0

This, again, is an article where the chief adulteration (addition of chicory) often amounts to a gross fraud. The figures seem to indicate a decline in the practice in recent years, but this may simply mean that vendors are now protecting themselves behind labels announcing admixture. When the article is supplied in such a printed label it is seldom advisable to waste money on its analysis.

Recently suspicion has been aroused that spurious coffee beans are on the market, but I am not aware of any definite instance in this country.

LARD.

Average adulteration, 5 years (1893-97) :—

England and Wales	...	...	3.4
West Riding C.C.	...	...	0.9
Boroughs	...	...	4.7

Beef stearine is sometimes employed to stiffen lard.

Water and cotton seed oil, etc., are also used as adulterants, but latterly there appears to have been considerable improvement.

SPIRITS.

Average adulteration, 5 years (1893-97) :—

England and Wales	...	...	16.8
West Riding C.C.	...	...	20.1
Boroughs	...	...	23.7

In taking samples of spirits the ground is very much cleared by the fact that the legislature prescribes a distinct minimum of strength in these cases; but in this branch the Inspector does not hold so much the high position of protector of the public health as in the case of milk, drugs, etc.

In many parts of the West Riding, publicans protect themselves by "exhibiting" in some out-of-the-way corner a notice that all spirits are diluted. It is futile to purchase samples for analysis in the face of such a notice. Again, some vendors who sell diluted spirits in their various drinking rooms could supply an Inspector asking for half a pint with an article of superior strength. To avoid this, an Inspector may ask for, say 2d. of whiskey, and pay for same; then, having noticed which keg it was supplied from he is entitled to ask for his half pint out of that particular receptacle.

It should be borne in mind that the strength of spirit prescribed by the ACT is not a STANDARD in the ordinary sense but a MINIMUM, and there can be no excuse for selling below this very low figure. At the same time, Inspectors are probably serving the best interests of the people in looking after substances of more value, as a food or a drug.

DRUGS.

Average ratio of adulteration, 5 years, 1893-97 :—

England and Wales	...	...	11.0
West Riding C.C.	...	...	12.1
Boroughs	...	...	12.8

This is a wide branch of the work, bristling with difficulties, but much good can be done by sampling those drugs of definite composition which are much used by the public and much liable to sophistication.

It is of no use purchasing such a drug as "Life and Health Elixir," "Castor Oil Pills," and many other such remedies which may consist of practically anything. With regard to properly regulated drugs the case is different, for it has been held that where a person purchases a drug by the name which appears in the British Pharmacopœia it ought to be of the composition there prescribed. The following is a list of drugs which may be usefully purchased for analysis, and the amounts to be asked for in each case :

Almond oil, 4oz.	Benzoic Acid Lozenges, 2oz.
Oil of eucalyptus, 2oz.	Tincture of Iodine, 2oz.
Olive oil, 4 oz.	Lemon Juice, 4oz.
Camphorated oil, 4oz.	Mercury ointment, 2oz.
Antimonial powder, 1oz.	Compound mercury powder, 4oz.
Gregory's powder, 2oz.	Sulphur ointment, 4oz.
Milk Sugar, 3oz.	Zinc ointment, 4oz.
Milk of sulphur, 2oz.	Sweet spirit of nitre, 3oz.
Saffron, $\frac{3}{4}$ oz.	Spirit of sal volatile, 4oz.
Precipitated chalk, 4oz.	Paregoric, 2oz.
Jalap, 2oz.	
Fluid magnesia, $\frac{1}{2}$ pint.	

If the above articles are supplied so as not to conform to the requirements of the British Pharmacopœia, a conviction would be obtainable under section 6 of the 1875 Act. Some one may ask why should the B.P. provide the standard, and therefore I will give its authority. By the Medical Act of 1858, section 54, the General Council of Medical Education of the United Kingdom were directed to publish a book containing a list of medicines and compounds, etc., to be called the British Pharmacopœia. By the Medical Council Act, 1862, section 3, a copy of the Pharmacopœia was authorised to be admitted in evidence. By the Pharmacy Act of 1868, section 15, any person who shall compound any medicine of the B.P. except according to the formularies of the said B.P. is liable to a penalty.

In the case of *White v. Bywater* (19 Q.B.D. 582, 1887) a case was stated by the magistrates asking whether they ought to have convicted a defendant who had sold tincture of opium deficient in opium to the extent of one-third, and in alcohol to the extent of nearly one-half as compared with the standard prescribed by the British Pharmacopœia, it being admitted that tincture of opium was a well understood term in the trade, and that the article sold was not of the nature, substance and quality of tincture of opium, as understood by the person usually dealing with that article, and the British Pharmacopœia was recognised as a book of authority respecting preparation of tincture of opium and other drugs.

The High Court held that the defendant was liable to be convicted, although the purchaser had not specifically asked for tincture of opium prepared according to the receipt in the British Pharmacopœia, the evidence having shown that the article supplied was not of the nature, substance, or quality of the article demanded.

PRESCRIPTIONS.

Medicines compounded according to special prescriptions may be purchased for analysis, if proper care is exercised. It is advisable for the Inspector to have three facsimile copies of the same prescription. Hand one to the chemist, and after paying for the mixture, go through the formalities as to dividing and sealing. Then in sending to the analyst it will be necessary to attach a copy of the prescription for his guidance; the third copy being kept by the Inspector. If the certificate shows any variation, proceedings should be taken under section 7 of the Act. Proceedings under this section would be effective even though the purchaser got more for his money than he demanded. The offence is in not being in accordance with the demand; there is nothing about prejudice in this section.

WHAT NOT TO BUY.

Having considered how to make purchases, and what class of articles may be most usefully purchased, we may now inquire what not to buy. Although "food" includes

every article used for food or drink, except water, and "drug" includes medicines for external or internal use, still there are a great many articles which it would be a waste of money to submit for analysis.

UNSUITABLE SAMPLES.

Articles of the following types should be left almost alone by Inspectors, or purchased only in case of strong suspicion:—

- (1) Articles not likely to be adulterated, e.g.: white sugar, flour, coffee berries, camphor, caraway seeds, candied lemon peel, arrowroot, sago, sweets.
- (2) Articles having no recognised standard of composition or not capable of definite analysis, e.g.: drugs not mentioned in the Pharmacopœia: Salad oil, oatmeal soap, marmalade, jam, Indian brandy, life and health elixir, chlorodyne lozenges, sulphur hair restorer, glycerine and lime cream, allspice, mixed spice, chocolate.
- (3) All proprietary medicines. These are specially exempted.
- (4) Articles affected by High Court decisions, e.g.: Baking powder (not a food), vinegar (not necessarily from malt or grain).

To the Sanitary Inspector the duties under the Food and Drugs Act are oftentimes particularly irksome, for they are duties about which everybody has formed his own opinion. One will be accusing him of doing too much, another of not doing enough. I daresay most of you are conscious of two grand pitfalls in your work—the one extreme indifference bordering on carelessness, the other over enthusiasm, sometimes assuming too much a detective or police-like form. The one sees a camel in every gnat, the other fails to see a camel though it may be before his very eyes. Our desire should be to proceed in a middle course between these extremes: while steering clear of Scylla, we should beware of being swamped in Charybdis.

One word more as a protest against irregularities in the working of these Acts, which in some places, unfortunately, seem to be not uncommon. To purchase samples irregularly, to find them adulterated and then to tell the tradesman (which the Act does not sanction) rather than to summon him, is merely playing with important Acts of Parliament. It is our duty to punish the guilty, and to let go the innocent. In judging of a certificate provided by the analyst, the Amount of adulteration is too often considered as the main factor in framing a prosecution. It should be borne in mind that a small amount may be equally as fraudulent as a large. Of course, it should be a matter of constant concern to us to prevent the law being a means of persecuting the dealer, and of interfering with just trading on the one hand, whilst at the same time we should allow no false feeling to prevent our putting a stop to what has been too long an enormous source of addition to the moneybags of the dishonest dealer and so necessarily a cheat to the community, especially the poor. This is (and I think you will agree with me) the true object of the Acts of Parliament, and to carry them out honestly and faithfully is the duty of those to whom their working is entrusted.

The above paper was read at a meeting of the Yorkshire Branch of the Sanitary Inspectors Association on April 8th, 1899, and is striking evidence of the splendid public health and educational work the branches do.

ROCKEFELLER'S HIRELINGS AND THE PETROLEUM BILL TRICKERY.

Our contemporary the *Ironmonger*, in its editorial comments, says:—"It is no exaggeration to say that the Government have played a discreditable trick on the House of Commons in the matter of the Petroleum Bill. It will be remembered that on March 15th a Bill introduced by Mr. Harold J. Reckitt, the member for Brigg, with the main object of raising the legal flash-point from 73° to 100° Fahr. (Abel close test), came before the House. The

Bill was drafted in accordance with the finding of the majority of the Petroleum Committee, and it was pretty certain that it would be carried by a handsome majority if the House were left to itself. Its rejection, however, was moved by the Government on the express ground that they were preparing a Bill of their own, which would deal with the matter in a more comprehensive way than Mr. Reckitt's measure.

"Influenced, no doubt, by what it regarded as a promise, the House rejected Mr. Reckitt's Bill by 244 against 159 votes. More than three months have since passed, but the Government Bill has not been produced. Various semi-official statements have, however, from time to time appeared in the Press describing its scope, and on several occasions Mr. Jesse Collings, when questioned on the subject, has promised to introduce the measure 'very shortly,' 'before the end of April,' 'before Whitsun,' and so forth. We have now reached Midsummer, Government have seized the remaining Parliamentary time, but the Petroleum Bill is not among the measures with which they intend to proceed. When tackled on this want of faith Mr. Balfour shuffled about the exact wording of the promise, and the egregious Mr. Jesse Collings sat mute. That it not an heroic attitude, but it is, at any rate, less humiliating than to be put up like a man of straw to make promises which are not intended to be kept."

The Public Control Committee of the London County Council have reported that during the year ending March 31st, 1898, they investigated the circumstances of 304 petroleum lamp accidents which occurred in London during this period. Twenty-eight of these accidents had fatal results; while the remaining 276 caused fires to which the Fire Brigade were called, and thus became public. The Committee found that

39 WERE VERITABLE LAMP EXPLOSIONS,

the rest being cases of the ignition of the oil, which in the great majority of instances escaped through breakage of the reservoir. The Committee observe that as neither explosion nor sudden ignition usually takes place until the temperature of the oil has reached or passed its flashing point, they attach the greatest importance to the raising of the statutory test to a point higher than the temperature attained by the oil in the reservoir of lamps while burning. Inasmuch as

IT IS CLEAR FROM NUMEROUS EXPERIMENTS,

that the temperature of 100° Fahr. is rarely reached by petroleum oil while being burnt in lamps, the Committee believe that if no oil with a lower flash-point were used for illuminating purposes

THE GREAT BULK OF THE ACCIDENTS WOULD CEASE.

They are also of opinion that if only lamps of safe construction were used, the number of accidents would be largely diminished: but they realise that it would be impossible for any legislation to touch the immense number of lamps now in nightly use, or to prevent neglect and carelessness in the use of lamps originally safe. There have been 64 deaths already this year from Rockefeller's murderous American refuse oil. Those who obey the Standard Oil Co. and refuse legislation to stop this roasting alive degrade parliament and public life. They are either ignorant or bribed.

THE COMPOSITION OF MILK.

The composition of milk produced under different conditions as regards food of the cows was the subject of one of the addresses at the recent Dairy Conference. Sir Charles Cameron said:—

With the co-operation of Professor Carroll, superintendent of the Agricultural Department of the Commissioners of National Education, I have arranged some experiments to determine whether linseed or linseed-cake is the more economical food for milch cows. The experiments have not been carried on for a sufficiently long period to warrant any conclusions being deduced from

them, but the analyses of the milk of some of the cows experimented with have afforded results which are worth noting. At the present time a Bill to amend the Sale of Food and Drugs and Margarine Acts is before the House of Commons. It contains a clause enabling a committee of experts to provide standards for milk and other articles. There is at present a standard minimum strength for whisky and the other strong alcoholic liquors. If the Bill now before Parliament passes, there is no doubt but that the minimum amounts of non-fatty and fatty solids in milk will be considered by experts and a legal standard will be fixed for milk as has already been done for spirits. Although there is no legal standard for milk, that fixed by the Inland Revenue chemists, Somerset House, appears to be the one generally adopted, although many public analysts consider it too low. According to this standard, milk should contain 8·5 per cent. of non-fatty solids, and 2·75 per cent. of fat. In a few instances the milk of the cows at the Glasnevin Farm contained less than 2·75 per cent. of fat, and even less than 8·5 per cent. of non-fatty solids; but in no instance were both fat and non-fatty solids deficient. Eight cows were selected, and the following was the mean composition of the milk of the 8 cows for the whole six days:—Morning: total solids, 12·08; non-fatty solids, 9·18; fat, 2·9. Evening: total solids, 13·78; non-fatty solids, 8·9; fat, 4·88. The eight cows were then divided into batches and put on different diets. In the 48 specimens of morning's milk the non-fatty solids never were so low as 8·5 per cent., the minimum standard, while in 18 of the specimens the fats were below the minimum standard of 2·75 per cent. In the 48 specimens of evening's milk the solids not fat never sank below the minimum standard, but in 18 instances they were less than 9 per cent. It will be seen that so far as these 96 specimens of milk are concerned, the standard of 8·5 per cent. of non-fatty solids holds good; but that the standard for fat fails in the case of morning's milk. The morning's milk was rich in non-fatty solids and poor in fat, while the evening's milk was rather poor in non-fatty solids and very rich in fat. In some instances the percentage of fat was more than twice as large in the evening's milk as in the morning's. There were only eight-hour intervals between the times of the milkings; if the intervals were longer the difference between the morning and evening's milk might not be so great. The diets upon which the cows were placed after the first week of the experiments seem to have been insufficient. Three received daily each for one week 9 stones of mangels, 17 lb of hay, and 4 lb of linseed cake. Their combined weight was on this diet reduced by 178 lb. They gave less milk by 22½ lb. The composition of the milk remained unchanged as regards the morning's, and in the evening's was slightly richer. A batch of three cows fed daily on 9 stones of mangels, 17 lb. of hay, and 5 and 1·5 lb. linseed, lost in one week 245 lb. The yield of milk declined only by 6 lb., and its composition practically remained unaltered. Similar results were obtained in the case of other batches of cows not receiving the usual food. It is the flesh of the animals that first declines when the aliment is insufficient. I shall not, however, dwell further on this point, as it will be made the subject of a thorough investigation at Glasnevin.

THE FOOD AND DRUGS BILL LIKELY TO BE SHELVED.

THE Sale of Food and Drugs Bill meets with such hostility on the report stage that there is no longer any reasonable prospect, in the present congested stage of public business, of finding time for its further discussion. In its altered state it satisfies no section of the House; the agricultural members least of all. The provisions as to the control of the sale and storage of margarine, and the mixing of butter with margarine, are by the county members held to be hopelessly inadequate, and they declare they would rather see the Bill dropped than passed in its present shape; the supporters of the margarine makers are also opposed to it, as they are opposed to all restrictive

legislation. One section of the adulteration question has already been referred to a Departmental Committee—that of the use of preservatives in food, and under all the circumstances the Government will probably, says *The Pall Mall Gazette*, be induced to shelve the whole subject for another year.

ADULTERATED FOODS.

WE sat at a table delightfully spread,
And teeming with good things to eat,
And daintily fingered the cream-tinted bread,
Just needing to make it complete
A film of the butter so yellow and sweet,
Well suited to make every minute
A dream of delight, and yet while we eat
We cannot help asking "What's in it?"
Oh, maybe this bread contains alum and chalk,
Or sawdust chopped up very fine,
Or gypsum in powder, about which they talk,
Terra alba just out of the mine.
And our faith in its butter is apt to be weak,
For we haven't a good place to pin it,
Annatto's so yellow and beef fat so sleek,
Oh, I wish I could know what is in it!

Ah! be certain you know what is in it,
'Tis a question in place every minute.
Oh! how happy I'd be could I only see
With certainty all that is in it.

The pepper, perhaps, contains cocoanut shells,
And the mustard is cotton-seed meal.
The coffee, in sooth, of baked chicory smells,
And the terrapin tastes like roast veal.
The wine which you drink never heard of a grape,
But of tannin and coal tar is made,
And you could not be certain, except by their shape,
That the eggs by a chicken were laid.
And the salad which bears such an innocent look
And whispers of fields that are green,
Is covered with germs, each armed with a hook,
To grapple with liver and spleen.
No matter how tired and hungry and dry;
The banquet how fine; don't begin it.
Till you think of the past and the future, and sigh,
Oh, I wonder, I wonder what's in it!

—*Rural New Yorker.*

A PLEA FOR URGENCY FOR THE OYSTERS BILL OF THE GOVERNMENT.

THE urgent necessity for legislative enactment in the direction of the Oysters Bill of the present session is further evidenced by some recent events in Brighton. On May 10th, a professional man invited twenty-two of his friends to an oyster supper. Thirty-five dozen oysters were ordered from a local shop, the proprietor of which, it is stated, has oyster-layings and ponds a few miles from Brighton, which have been characterised as dangerously liable to contamination by sewage, in repeated reports by Dr. Newsholme, Medical Officer of Health of Brighton, and more recently in Dr. Bulstrode's report to the Local Government Board. It appears, however, that the oysters for the above supper came direct from a well known place, other than the above, which is believed to be free from sewage contamination. All the members of the party partook of oysters with the exception of one who was nervous on the subject. He has remained well. Of those who ate oysters, three suffered from unpleasant symptoms or serious illness, while the remaining eighteen do not appear to have had any ill-effects. One guest had an attack of vomiting which lasted throughout the night from the time of his arrival home at 10 p.m. No further symptoms developed. The two remaining guests, one a member of the Brighton Town Council, and one a member of the Hove Town Council, developed typhoid fever about six to eight days from the date of the oyster supper. One

has since died, and the other is still ill. In both these cases the first symptoms resembled those of influenza. The incubation period, although short, is by no means unexampled. The above instance, although it may bring home to many who would not otherwise realise it, the great risk involved in eating oysters from sources unknown to them, is only one of a large number of others recorded in the above town, and in other towns throughout the country in which the matter has been investigated. We have received from a Brighton correspondent an account of two other recent cases of poisoning by oysters. The particulars are briefly as follows: A gentleman and his wife were driving on June 6th past some oyster ponds, and stopped at the neighbouring oyster shop and each had six oysters. They were both very ill before reaching home. On reaching home they both had violent vomiting, associated with a burning sensation in the throat, and remained ill during the night. Such cases as the above indicate the urgent necessity for legislation for the protection of the public health in respect of shell fish. The President of the Local Government Board has promised such legislation; a Bill has been introduced into the House of Lords, and it would be a public calamity were the Government to allow the Bill to drop. By pressing it forward now they will deserve, and will secure, the gratitude of a large number of important local authorities, who at the present time feel they are face to face with a serious cause of sickness and death with which they are completely unable to cope.—*British Med. Jour.*

THE NEW FOOD AND DRUGS BILL.

MR. LAMBERT (Devon, South Molton) asked the first Lord of the Treasury, on June 22, if he could state when the Report stage of the Food and Drugs Bill would be taken.

MR. BALFOUR.—I am afraid I cannot give a definite reply to this question.

AN INSIDIOUS MOVE OF THE BOARD OF AGRICULTURE TO HARASS TRADERS UNDER THE NEW FOOD AND DRUGS ACT.

AN apparently innocent amendment by Mr. Walter Long, chief of the Board of Agriculture, reveals the gentleman's attitude towards traders in a light which ought to provoke the bitterest hostility of every honest man in the House of Commons. The amendment is to Clause 4 of the Act as approved by the Grand Committee and by a piece of trickery violates the pledge given to the House of Commons that a Board of Reference would be appointed to fix standards and to determine what was adulteration. This Board was to consist of experts from the manufacturers, retailers, and analysts.

MR. WALTER LONG's attempt to hocus the House of Commons to give his department the power to harass and penalise traders consists of a proposal to the Board of Agriculture by an order in Council should at any time have power to declare what was or what was not adulteration or fraud in food—i.e., traders are to place their livelihood and their reputations in the hands of Mr. Walter Long and Mr. T. H. Elliott.

If English traders of to-day are so week-kneed that they will consent to give this Board of incompetents the power to at any time destroy their business, they are made of different metal to what we think they are. The traders and working classes of the United Kingdom ought to take immediate steps to defeat this amendment by Mr. Walter Long. Better far have no new Food and Drugs Act than one hatched in venom and brought out in dishonesty.

If the Board of Agriculture was composed of angels it would even then be supreme folly to entrust it with the power to declare that this, that, or the other article of food is liable to prosecution or must not be sold. So

take as an example a cocoa containing sugar and arrow-root. By order in Council the sale of such a food, or in fact any article could at any time be made penal. We repeat that we mistake the temper of British manufacturers of food stuffs if they will tamely allow Mr. Walter Long and his fellow *ignorami* of the Board of Agriculture to establish a "Star Chamber" of the character they seek for in this insidious amendment to clause 4. It would make every manufacturer of food stuffs not his own master, but the servant of Mr. Long and his successors at the Board of Agriculture. Vinegar, Starch, Condensed Milk, Golden Syrup, Flour, Mustard, etc., may one day have one standard, and the next another. What this means to traders is manifest. Strangely enough this Machiavellian amendment was only put in last week on behalf of the Government, giving no time for those vitally interested to consider it. If it be rushed through the House of Commons it will be an infamy.

SPIRIT LABELS AND THE FOOD AND DRUGS ACTS.

AN important decision under the Food and Drugs Acts was arrived at on July 1st, at the Middlesex Sessions, presided over by Mr. R. D. M. Littler, Q.C., C.B. Wm. Pendred Applebee, wine and spirit merchant, of 66, Archway Road, Highgate, appealed against a conviction and fine of 20s. and 27s. 6d. costs for selling brandy which was reduced in strength or gravity to 27½ degrees under proof. Mr. George Elliott and Mr. Arthur Hutton appeared for the appellant; and Mr. Slade Butler for the respondent, A. L. Bridge, the Food and Drugs Inspector of the county. The facts were very simple, and were not in dispute. The Inspector bought a bottle of brandy, paying 2s. 8d. for it, and on examination by Mr. Bevan, the county analyst, it was found to be 27½ per cent. u.p. When analysed by Somerset House it was 27 u.p. On the bottle was a large label, and round the collar was another, the shape of a crescent, with these words on—"C Quality. About 25 u.p. The Highgate justices convicted upon this. Mr. Slade Butler said the whole point of the appellant was that this was a mixed article under section 8 of the Food and Drugs Act, but he pointed out that this was considerably over 25, and therefore it was misleading. Mr. Littler, looking at the large label on the bottle, asked if that was the only one. Mr. Elliott replied that there was a small one, which was the one in question. Mr. Butler said it really came to the question as to whether this was sufficient notice. Mr. Littler pointed out that if the words, "good quality, guaranteed pure," on the large label had been followed by what was on the small one, then Mr. Butler would have been in a difficulty. Mr. Butler said the attention of the purchaser was not called to it. Mr. Littler: This is very distinctly written here. Can you say that it is not distinctly and legibly written on or with the article? Mr. Butler: But that label is misleading. Mr. Littler: Did not this comply with the section? Mr. Butler: The inspector did not see it. Mr. Littler said that might be. It was clear that the notice need not all be on one label. If the Act was intelligently drawn it would require that it should all be one label. The defendant had carefully read the section, and it seemed to him correctly. He did not pledge himself to the quantity, and whether Mr. Bridge had been misled or not did not matter. Mr. Butler said one label contracted the other. Mr. Littler said he must consider the Act of Parliament, and the appeal would be allowed. Mr. Elliott desired to say that his client had been in business for 45 years without complaint, and Somerset House analysis showed this 27 per cent. and evaporation accounted for a good deal. Mr. Littler thought that it would be better if "good quality, guaranteed pure, about 25 u.p." was all on one label. Mr. Elliott: No doubt Mr. Applebee will accept that suggestion.

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Food and Sanitation.

SATURDAY, JULY 15, 1899.

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BREWERS AND THE WEIGHTS AND MEASURES ACT.

"Mr. H. Broadhurst, M.P., in his capacity as an alderman of the Norfolk County Council, has just discovered a curious point in connection with the administration of the Weights and Measures Acts. It is popularly supposed that the local authorities are charged with the duty of inspecting and marking whatever measures are

used for selling by measure. But it appears that there is an exception made in respect of brewers' barrels. A tub or a beer barrel sent out to a publican or to a private customer may be alleged by the brewer to hold so many gallons, but apparently the correct measure has to be taken on trust; for on raising the question at the Norfolk Council, Mr. Broadhurst was informed that a special order had been sent out by the Board of Trade that beer barrels were not to be interfered with. It would be interesting to know the reason for this special exemption from a general law. Who issued this order, and by what authority," asks the *Westminster Gazette*. Long before Mr. Broadhurst made his discovery we exposed this fraud in *Food and Sanitation*. As to who caused the order to be issued, our contemporary need scarcely ask. The brewers find a lot of money for the party war chest in fighting elections, and they require their *quid pro quo*. It is merely another instance of the bribery and corruption of which our present Government has given us so many examples. Money can prevent the passing of a Bill to stop the sale of the deadly 73° refuse American Oil, and it can shield thieving brewers from punishment and enable them to deliver 35 gallons to their "tied house" serfs and charge for 36 gallons. Truly the party war chest is a wonderful institution. It enables Right Hon. and other shining public lights to repel with indignation accusations that bribery and corruption are actively practiced every day in our Houses of Parliament, and proves to all who do not know that we are not the venal gang our American cousins are. One is bound to admit in admiration or otherwise that our Liberal or Conservative party managers can give Tartuffe points.

A RECORD IN SUPPRESSING ADULTERATION.

The lengthy reports of the proceedings against the Crook Co-operative Society and against Bell, Sons and Co., Limited, of Liverpool, which we publish in another page, will be of interest to our readers and of value to traders. This is the sixth time within two months in which Mr. B. Scott-Elder has recovered a £20 penalty, and is a striking testimony to his ability in conducting his own cases, and to the intense interest he takes in suppressing fraud in Durham County. It is hard to judge by a purely money standard the value of such service. It ensures the food supply of the county being purer and the purchaser getting better value. What this means in respect to milk for infants and the public to take one item alone, is a saving of life and money to a greater amount than the Inspectors' department costs. We wish every other English county were as ably served.

UNSOUND FOOD.

DAVID GAMBLE, 95, Corporation-street, Belfast, was summoned, on July 3rd, by Inspector Neeson with exposing for sale a quantity of sausages, which were, as alleged, unfit for human food. Mr. Spiller prosecuted, and Mr. John M'Kee appeared for the defendant, and pleaded guilty to a technical breach of the Act, but explained that there was an arrangement between the defendant and the manufacturer of the sausages that all which were unsold would be returned and fresh supplies made each day. It was on a Monday morning that the inspectors examined the food,

and the manufacturer's man was in the act of taking the sausages away. Inspector Adgie deposed that he was in company of the complainant on the occasion, and he noticed that the sausages were sour and decomposed. The magistrates considered that the food would have been highly dangerous had it been disposed of, but owing to the evidence of the inspectors they did not think the defendant intended to offer the food for sale, and imposed a penalty of 20s. and costs.

HUGH MONTGOMERY, 44, Lord-street, was also summoned for having, as alleged, exposed for sale a quantity of bacon and ham cuttings, these being unfit for human consumption. Mr. Spiller prosecuted, and Mr. P. M'Ginn appeared for the defendant. It was stated by Inspector Neeson that the material was placed on the counter, and the price labelled upon it. Mr. Burke said the magistrates considered this a very serious case, and could not impose a lower penalty than £5 and costs.

A summons was brought against William James Cuddie, 205, Shankill-road, for exhibiting for sale a quantity of unsound griskins. A fine of £5 and costs was inflicted.

AN INGENIOUS MARGARINE SWINDLE.

At Cardiff, on July 4th, Thomas Taylor, alias Jones, of 184, Arabella-street, was summoned under exceptional circumstances stated by Mr. Halloran, from the Town Clerk's Office. This, he said, was a charge of giving a false warranty, and defendant, for the offence, was liable to a penalty not exceeding £20. Defendant lived in a small house, and for some time he exhibited a phonograph on the Hayes Market. Latterly he had visited various wholesale establishments and purchased margarine in quantities of about 28lbs., for which he paid cash. He then sold the margarine to small shopkeepers in the poorer parts of the town and realised 6d. or 7d. per pound for that which he himself had paid for at the rate of 3½d. or 3d. per lb., and at the same time he gave a warranty as to the genuineness of the article. The Stipendiary: With the result that retailers might be prosecuted and put to the expense of defending themselves? Mr. Halloran: That is so. Mary Jane Marshall, grocer, Court-road, said that on the 6th of February Taylor called upon her and offered for sale some butter, and she purchased 6lb. upon his production of a written warranty that it was pure. Witness herself had been summoned for selling adulterated butter, but was acquitted on producing the warranty. Defendant called the following week, and then she paid him for the butter and ordered some more, which he failed to deliver, and she now owed him 3s. 4d. The public analyst found the sample to consist of 100 per cent. of margarine, but no true butter. Defendant did not appear, and the Stipendiary, in his absence, inflicted a penalty of £20 and costs, or three months in default of distress.

WATER AT SPIRIT PRICE.

At Maidstone, on July 3rd, George Sears, landlord of the Victoria Hotel, was summoned for selling adulterated whiskey, on the 16th May. Mr. S. L. Monckton prosecuted, and Mr. H. J. Bracher defended. On the 16th May, William Jackling, Sanitary Inspector, purchased, through his assistant, Ernest Jackling, a sample of Scotch whiskey at the Victoria Hotel. A Miss Palmer served the spirit, and she was told for what purpose the whiskey had been bought. The Public Analyst's certificate showed that the whiskey was adulterated to the extent of 4.08 with added water. Mr. Bracher, in defence, said the Sale of Food and Drugs Act was a very technical one. He had two technical points to raise, and the first was that, under Section 14 of the Act of 1875, it was provided that the person purchasing any article with the intention of submitting the same for analysis should do certain things set forth. In the present case, however, the person purchasing was Mr. Ernest Jackling, and the person "doing certain things" was Mr. William Jackling. His second point was that the Act

said that after the completion of a purchase it should "forthwith" be notified to the seller for what purpose it was purchased. He should call evidence to prove that from the time the whiskey was bought to the time Mr. William Jackling came in there was an interval of from one to two minutes. Mr. Monckton explained both Mr. Bracher's points away by referring to cases decided upon in higher courts, showing that a deputy might be appointed, and that, within two minutes might be called "forthwith." Defendant was fined £1 and 11s. costs.

At Clerkenwell, on July 5, John Regan, of 232, Hoxton-street, was summoned by Inspector Ward, of the Islington Vestry, for having on the 30th May sold, to the prejudice of the purchaser, whiskey which was not of the nature, substance, and quality of the article demanded, the strength of the said whiskey being 29.3 degrees under proof.—Mr. Bramall prosecuted, and Mr. Ricketts defended.—The whiskey was purchased by the inspector at the "Enterprise," Upper Holloway, of which house Mr. Regan was alleged to be in charge. Cross-examined: He could not see any name over the door of the licensed person; but he was told who he was.—Henry Crouch, of the "Enterprise," was called, and denied that he said he was managing the house for Mr. Regan. He said the licensed holder was Mr. Walter, and the proprietor was Mr. Regan. Witness acted as manager, and accounted for the finances of the business to one or other of these gentlemen.—Mr. Bros said there was evidence that Regan was part proprietor, and he was responsible for the act of the servant.—Mr. Ricketts said there was no evidence that the servant here was the servant of the defendant. Crouch did not sell the whiskey. He must protect his client from a conviction, as he was a licensed holder of another house, and a conviction against him would tell with the Licensing Justices.—Mr. Bros said he dealt with the defendant as if he was an ordinary shopkeeper, and not as a licensed person.—It was finally agreed that the name of John Walters should be substituted for that of Regan.—Mr. Ricketts then pleaded guilty, and said the reason for the dilution was faulty "breaking down." Mr. Bros imposed a fine of 10s. 6d., with 23s. costs.

ADULTERATED CAMPHORATED OIL.

At Smethwick, Jane Brown, 10, Brasshouse-lane, was summoned under the Food and Drugs Act for selling adulterated camphorated oil, on April 28th. Mr. Van Tromp (Inspector) appeared to prosecute, and explained that on the date in question an inspector visited the defendant's shop, and found on sale camphorated oil in small bottles. He purchased several of the bottles, and upon being analysed, the oil was found to be deficient to the extent of 64 per cent. of the proper camphor, and instead of the oil being olive it contained 80 per cent. of mineral oil. He pointed out that the defendant could recover from the wholesale dealer the amount of any fine and costs which the Bench might impose. There had been two offences committed, but only one summons issued. Mr. A. J. Glover, who defended, explained that the defendant only purchased a dozen bottles at 8d., and sold them again at the rate of 1d. each. Defendant was fined £1 5s., including costs.

MARGARINE PROSECUTIONS.

ALBERT BLICK, of Mornington-road, Smethwick, was summoned for selling margarine as butter on the 15th ult. An assistant of Mr. Van Tromp stated that he went to defendant's house, and purchased what he thought was a quarter-pound of butter. On analysis it was found to only contain 16 per cent. of butter. A fine of £1 5s., including costs, was imposed.

JAMES GRIFFITHS, of Cambridge Road, Smethwick, was summoned for exposing margarine for sale which was not labelled, and further for delivering margarine not properly labelled, on April 28th. Mr. Van Tromp

mentioned that of the samples of butter taken recently in Smethwick 25 per cent. had proved to be margarine, and yet it was unblushingly exposed for sale as butter. Mr. H. Grasson gave evidence in support of the case. Defendant admitted the offences, but in extenuation said that he had "gone out" of printed papers. A fine of 2s. 6d. and costs was imposed in the first case, and he was ordered to pay the costs in the second, the total amount being 18s. For similar offences William Cheshire, of Middlemere Road, was fined 18s., including costs.

At Belfast, on July 3rd, Daniel M'Grath, 68 and 70, Snugville Street, was summoned by David M'Master, Inspector of Food and Drugs, for having on the 10th ult. sold margarine as butter. Mr. Spiller prosecuted, and Mr. Joseph Donnelly, who represented the defendant, pleaded guilty on his behalf. The Court imposed a fine of 40. and costs.

ADULTERATED MUSTARD.

At Dublin on July 6th, Catherine Geraghty, 10 Sandwith Street, was fined 10s. for selling mustard to which 25 per cent. of its weight of foreign farinaceous matter had been added as an adulterant.

MARY KENNY, 16, South King Street, was fined £2 for selling mustard adulterated with a portion of its weight of foreign farinaceous matter, making thereby a mixture of 75 parts of farinaceous matter, and 25 parts of mustard.

HOW DAIRY COMPANIES ARE INJURED.

At Birmingham Police Court on July 7th, William Gilbert Fowler and Thomas Nathaniel Fowler, farmers, of Stonehouse, Gloucestershire, were summoned for selling milk deficient in cream. Mr. E. V. Hiley prosecuted, and Mr. Tanner watched the case on behalf of the Callow Park Dairy Company. Mr. Hiley stated that the defendants were under a contract to supply the Callow Park Dairy Company with milk. Inspector Jones met the train from Stonehouse and took two samples from the churns consigned by the defendants. There was a label on the churns which stated that the milk was "warranted pure with all its cream." One sample was deficient in fat to the extent of 27 per cent., and the other 32 per cent. There was no imputation against the Callow Dairy Company, as the proceedings were taken as much to protect them as the public. There was a previous conviction against the defendants, and the magistrates, in fining each defendant £7 10s. and costs, said that if they came before the Bench again they would be heavily fined. Mr. Tanner stated that the mention of his clients' name was calculated to do them injury, and he wished it to be known that they were not to blame. Mr. Fisher said that there was no slur whatever upon the Callow Dairy Company; on the contrary, they had done a public service by helping the prosecution.

ADULTERATED CAMPHORATED OIL.

A FALSE WARRANTY.

At Durham, on July 5th, a summons was heard against Messrs. Bell, Sons and Company, Limited, wholesale druggists, Liverpool, for having committed a breach of the Food and Drugs Act, by supplying a false warranty in regard to certain bottles of camphorated oil. Mr. B. Scott Elder prosecuted, and Mr. T. Jennings, Bishop Auckland, defended. Mr. Scott Elder said this was one of the most peculiar cases he had ever had to bring before the court. They had had to bring the retailer before them in previous cases, but in the present instance he was glad to tell the Bench that they had before them the wholesale people, who had not only compounded the article, but had given the retailer a false warranty in writing. The facts were very simple. Camphorated oil was purchased at Langley Moor. The trader who had received it from the defendants very wisely refused to open the parcel until a

warranty had been given, and Mrs. Fishwick, the retail dealer, had written to Liverpool, stating that prosecutions were taking place in this part of the county, and that she must therefore have a warranty. The defendants sent a warranty, but on analysis it was found that the oil was only half the camphorated oil required by law, and instead of being compounded of olive oil, which cost from 5s. to 7s. 6d. a gallon, it was compounded of rape and mineral oil, which cost only 1s. 6d. a gallon. Mr. Scott Elder was then sworn, and deposed to visiting Mr. Wm. Fishwick's shop at Langley Moor, and purchasing six bottles of camphorated oil. The bottles were marked with a label containing the words, "Camphorated oil, Bell, Sons and Co., Liverpool." He divided it into three parts, and sent one to the county analyst, who reported that the sample contained 11.81 of camphor, oil belonging to the rape oil class 37 per cent., and mineral oil 30 per cent., and stating that he was of opinion that the sample was not compounded in accordance with the British Pharmacopœia, in which there was no mineral oil, and which was 80 per cent. of olive oil and 20 per cent. of camphor. Witness received a notice from the defendants' lawyers asking for a bottle to be forwarded, and witness sent a bottle, and they thereupon informed witness that the firm of John Bell and Sons was now defunct, and that they were a limited company. Thereupon witness went out to Mrs. Fishwick's shop again, and took a second sample of eight bottles, which were marked Bell, Sons, and Co., Limited, and the analysis in this case also happened to be just about the same as the other, so that he had no difficulty in proving a false warranty. In the second case the camphorated oil was 11.63 per cent., and the mineral and rape oils were in quite the same proportions. Mr. Jennings: Have they not told you they got that oil from a firm of oil merchants, and that it was sold to them as olive oil?—No. Have they told you the price they paid for it?—No. How then do you rely upon your statement that the oil was bought at 1s. 6d. a gallon.—I did not say so. I said such oil as was found could be bought at 1s. 6d. a gallon. Mr. Jennings: Do you know that they bought 290 gallons of olive oil at 2s. 6d.? The Chairman: It does not make the case any different. Mr. Jennings: Except, your worships, that he has to prove that they sold it knowing it was not olive oil, and that they gave a false warranty. Mrs. Fishwick, who manages a shop for her husband at Langley Moor, said they bought some camphorated oil from defendants on May 2nd, and the invoice was produced. When she got the order in she wrote asking for a warranty, saying otherwise she would send the goods back. A warranty was sent by return of post. Witness produced the card-board box in which the oil was sent. The box had on it "Bell, Sons and Co.," but the bottles bore the name "Bell, Sons and Co., Limited." She had never had camphorated oil from any one else. She did not know about any change in the firm, and just wrote as usual, her reason to them being that they were having oils analysed, and she wanted to be on the safe side. Cross-examined: Witness received the warranty on the 18th, about a week before Mr. Elder called. Witness had not paid for the oil yet, and the contract was therefore not complete at the date of sale. For the defence, Mr. Jennings contended that this was not a warranty given at the date of sale. It was posterior to the date of sale. According to Mrs. Fishwick's evidence the warranty was given afterwards, and therefore did not apply to this case. The Chairman said the Bench must decide against him in this case on that point, the case being different. Mr. Jennings then argued that by section 20 of the Public Health Act it was necessary that the analyst's certificate should be obtained previous to issuing proceedings. He quoted the Queen v. Smith, decided in 1896 before Justice Hawkins in the Divisional Court, where it was held that the certificate of the analysis was a condition precedent under this section. Before taking these proceedings, Mr. Elder must have submitted this oil to an analyst, and obtained an analyst's certificate. Before Mr. Elder could take proceedings in respect of which the small bottle,

which was the only bottle in respect of which the proceedings were taken, he must submit it to the analyst. The Chairman said that was very ingenious. Mr. Jennings: Yes, sir, it is so. How can Mr. Elder institute proceedings and say we have given a false warranty until he has got the analysis? Proceeding, he said it was necessary under this section that Mr. Elder must prove conclusively to them that they gave the warranty, knowing it to be false. Mr. Jennings proceeded to quote another case, and the judgment of Justice Hawkins in February. The present defendants asked for a quotation for olive oil from a wholesale firm (named), and they submitted a sample. The defendants did not get a written guarantee with it, but according to the sample they ordered 290 gallons, and paid the wholesale price of 2s. 6d., not 1s. 6d. a gallon, which Mr. Elder would lead the Bench to believe had been paid. This oil, as it was received, was made up into bottles after being mixed with camphor, and nothing whatever was added to it. Capt. Randolph: You are short of camphor.—Mr. Jennings said Mr. Elder had taken the ground of olive oil being deficient. He would prove that the defendants had another quotation at the same price for olive oil, from another firm. If he proved these facts it entirely disproved any intention on their part to give a false warranty.—A warehouseman in the employ of the defendants at Liverpool, Clarkson by name, was called, and spoke to quotations being obtained for olive oil. They got a sample in a bottle labelled "olive oil." Witness and the secretary of the firm both examined it, and then they ordered a quantity of it. They received the oil and the invoice produced in due course, and the oil was in no way interfered with after coming to the defendants' premises, except that it was mixed with camphor. He had since seen the manager of the firm who supplied the defendants and asked about the oil. Witness asked if it contained any mineral oil, and he said it did not. Witness had a quotation from another firm, and they quoted for the same price as the firm from which the oil was got by the defendants.—The Chairman, in giving the decision of the bench, said they did not know now where adulteration stopped. He daresay even Mr. Elder, who was very cautious in these matters, likely ate adulterated food. They had no doubt whatever about the case. It was proved conclusively, and they would inflict the full penalty of £20 and costs. This was a case where large manufacturers were concerned, who ought to take every care that the things they sold were genuine. It was impossible for any person who wished to go and buy oil to know without having tested it whether it was oil or not. The bench, in answer to Mr. Jennings, expressed willingness to state a case if the defendants thought of carrying it further.

A CO-OPERATIVE SOCIETY'S PURE BUTTER CONTAINS 47 PER CENT. OF MARGARINE.

A glaring case of fraud was investigated at Durham, on July 5, before the Rev. Dr. Greenwell and Capt. Randolph. The Crock Co-operative Society, Ltd., were defendants in three charges under the Food and Drugs Act.—Mr. Scott Elder, Chief Inspector for the County of Durham, prosecuted, Mr. T. Lambert, Gateshead, defended, and Mr. J. Brownless watched the case on behalf of the party from whom it was alleged the "butter" was purchased. It was agreed to take the first charge first, in which the Crock Co-operative Society were charged with having sold a half-pound of butter not of the nature, substance, and quality of the article demanded. Mr. Scott Elder said the Crock Co-operative Society was a very large concern, having branches in different parts of the county, and the case now before the court came from the Waterhouses branch, so that in dealing with it the bench knew they were dealing with a very large firm which knew not only how to buy but also how to protect themselves when buying. Now the butter in question contained more foreign fat than butter fat, and was sold as farm butter at the price of 1s. per lb. From these circumstances, he was

sure that the bench would agree with him that it was a case demanding their most serious consideration. Mr. Lambert had intimated that he intended to rely upon a written warranty. Under Section 25 of the Act, if a defendant could prove to the satisfaction of the Justices that he purchased the article in question as the same in substance and quality as that demanded by him, and with a written warranty to that effect, he should be discharged. He would not say a word at present to prejudice the written warranty in question, but this he would say, that if the Justices thought that this society had not exercised that judgment which they ought to have exercised, and tried to prevent their customers from being defrauded to this extent, the bench would consider whether anything but a very substantial penalty would meet the justice of this case. They were not there to consider whether this one or that one were to blame, but to protect the public. Mr. Lambert admitted the purchase, but Mr. Scott Elder thought they had better have evidence in case of an appeal. F. W. Benson, assistant to Mr. Scott Elder, sworn, said that on Saturday afternoon, May 20th, he went to the Co-operative Store at Waterhouses, and purchased a parcel of goods, including a half pound of butter, which was invoiced to him as farm butter, and for which he paid 6d.—that was at the rate of 1s. per lb. Charles Smith served him. After he made the purchase he came to the door and met Mr. Scott Elder there. By Mr. Lambert: Mr. Scott Elder did not go into the store with him to purchase. He did not hear any questions asked of the salesman as to who the society received the butter from. Mr. Scott Elder, sworn, said he received the parcel of goods from the last witness at the door of the store, and then went up to Charles Smith and told him who he was. Mr. Lambert thought that was quite unnecessary, as Mr. Scott Elder was well known. Mr. Scott Elder, continuing, said he then notified his intention of having the butter analysed by the public analyst, and divided it into three portions. He left one portion with defendants, and the other portions he brought away with him, sending one of the latter to the county analyst, whose certificate he would put in. Subsequently witness went up to the Store for the purpose of examining a warranty, which he was almost certain defendants would have, but when he got there the manager told him they had no warranty. The Chairman: Is the analysis here? Mr. Scott Elder: I will put it in now. It reveals 43·50 of butter fat, and 47·58 of foreign fat. That was to say that in this farm butter there was found more margarine than butter. That was the case for the prosecution. Mr. Lambert congratulated Mr. Scott Elder on the exceedingly fair manner in which he had placed his case before the Court. He was not there to deny for one moment that his clients were not very large sellers, and a duty was cast upon them to see that they got the best article they could from the market. Although he had got a legal defence, it was only fair to his clients to tell the Bench the true position, how they came to be possessed of this butter, and how they sold it. Mr. Francis Burns was a member of the Stoue, and was a farmer in the locality, and they purchased butter from him. The Burns brought them so much butter, and purchased so many goods, and the defendant society thought they were doing what was right and within the law in purchasing from a farmer. Of all people in the world one would expect to get good farm butter from a farmer, and particularly from a member of their own society. These were the short facts he would be able to prove, if necessary; and show the butter was sold exactly in the same condition as it was received. In addition to that he would put before the Bench what he contended was a warranty within the meaning of the statute, and was as follows:—"Ivesley Farm, Waterhouses, June 6th, 1899. I hereby certify that the butter supplied from me to the Waterhouses Store on May 20th, is pure butter. Signed, Francis Burns." The Chairman: You are prepared to prove this butter was got of that man? Mr. Lambert: Oh, yes. Mr. Scott Elder: My friend, Mr. Brownless, denies it. Mr. Lambert said he would prove it. Mr. Brownless, as representing the

original vendor, had no *locus standi* there whatever. He would probably have an opportunity of appearing later on, but he had no *locus standi* at present. Mr. Brownless said he appeared only to watch the case on behalf of Mrs. Burns, and she would volunteer her evidence if the Bench wished it. Mr. Lambert: I do not want her evidence. I have got my own here. I might say that in order to satisfy ourselves we have had an analysis made by Mr. Pattison. Analysts are probably like lawyers, they don't agree. Mr. Scott Elder objected to this. Mr. Lambert: Mr. Pattinson says there was 60 per cent. of butter, and at least 40 per cent. of margarine. It is bad enough either way. Charles Smith said he was employed by the Crock Co-operative Society, and on the 19th May received a parcel, 8 lbs. of farm butter, from Mrs. Burns' servant girl. The manager paid her for it. That butter was under his observation and charge from the time of its being received until Mr. Scott Elder's assistant purchased a portion of it. Mr. Scott Elder said witness was quite right in his date. The warranty was wrong. Witness (continuing) said they had not received any butter since from Mrs. Burns. There was no other farm butter in the Stores, and they sold it as received. The Chairman said it seemed that Mrs. Burns gave the warranty. Mr. Scott Elder: It is not Mrs. Burns at all. Mr. Lambert said it bore her signature. Mr. Scott Elder said the Bench would find it was signed under a misapprehension altogether. She did not know what she was signing. In cross-examination, witness said there was perhaps two or three pounds on the plate when the assistant called. They sold margarine at the Store in pats or rolls, but they did not keep it on the counter. This butter was on the counter. The difference in the appearance was due to the fact that margarine was wrapped in paper. But supposing you took the paper off the margarine and laid it on a dish beside a roll of butter could you tell the difference? Yes, distinctly. In what way? There is a difference in the shape and colour. By Mr. Lambert: The margarine they got at the Store was labelled as required by statute, and was kept in a separate place behind the counter. He was absolutely certain this butter was received from Mrs. Burns. Charles Sellers, foreman in defendants' grocery and provision department, said he did not remember the butter in question being received, and first saw it when Mr. Scott Elder's assistant came. There was no other farm butter in the place that week. Cross-examined: When he examined this butter, he found from the marks upon it it was from Burns'. The rolls, too, were larger than any other butter they received, and the butter was rather pale. Do you know butter varies in colour from week to week? Yes. So that you could not tell Mrs. Burns' butter through that? No. Do you mean to tell the Bench that you as an expert can tell margarine from butter? No. Then you are not like your friend, Mr. Smith? No. Re-examined by Mr. Lambert: The margarine was labelled as required by the Act, the rolls were bulkier and kept in a different place. There was no other farm butter on the premises that day. They did not make rolls of margarine themselves. It came wrapped in paper from the Co-operative Wholesale Society, Newcastle. The Chairman: You had other butter in the establishment? Witness: Danish butter, but no other farm butter in rolls. But supposing you got Danish butter made up into rolls, that is farm butter. Mr. Lambert: True, sir; but we had no other farm butter—. The Chairman: You had no other butter in rolls except this from Mrs. Burns? Mr. Lambert: All butter must necessarily come from a farm but—. The Chairman: I cannot tell now where it comes from (laughter). It ought to come from a farm. Mr. Lambert: I hope it does, sir. I hope I have satisfied you on that point (laughter). George Parkinson, manager of this department, knew that the butter in question was received from Mrs. Burns. It was under his charge when it came. They had no other sweet butter in the place. He was present, and the portion sold to Mr. Scott Elder's assistant was what they got from Burns. They had traded with the Burns for upwards of ten years. He agreed with the

previous witness as to the rolls of Burns' butter being longer in shape. Margarine was purchased from the Wholesale Society, and the pats were shorter and labelled to indicate what it was. Mr. Scott Elder: When I came to see you on the 3rd June had you a written warranty for this butter? Witness: No. And you told me you had not? Yes. I did not think there was any call to have one from a farmer. As a matter of fact did you ask for a written warranty when you bought this butter? No. As a matter of fact you never get a written warranty? Not from farmers. Would you mind letting us know how you got that warranty? Who wrote that warranty? I wrote it out, and Mrs. Burns signed it. You sent it up with a little boy, who also carried a note from you? Yes. Will you tell us what you said in that note? I cannot recollect. Did you say you were going to do business on different principles, and would she sign the enclosed? I cannot say. Did you tell her there was a prosecution pending? No. You did not? No. No. You kept that from her. What you said was that you were going to do business on different principles, and would she sign the enclosed? Mr. Lambert did not wish to take any objection to Mr. Scott Elder putting questions in this irregular way, but he was not a lawyer. He would ask Mr. Scott Elder to produce this letter, which would end the matter at once. Mr. Scott Elder believed the letter was in court. He thought the question a legitimate one. It subsequently transpired the letter was not in court. The Chairman: This warranty was got after the butter was sold? Mr. Scott Elder: And after the summons was issued. (To witness): How did that warranty get into my possession? Witness: I cannot tell. Did you send it? I cannot recollect. Did the Crock Society? I cannot tell. Mr. Lambert said he had to write to Mr. Scott Elder to see the warranty. Mr. Scott Elder said he wanted to let the court know how it came into his possession. It was a most extraordinary thing. The Chairman said the bench did not suspect that Mr. Scott Elder went and robbed the Society of it, or that he got in any surreptitious manner. Mr. Scott Elder: It was brought to me by an outsider, who came to ask me if I could do anything in the matter. Mr. Lambert repeated that the letter referred to was not in court. He did not care which way it was. If his clients did write as suggested it was wrong, but such an assertion as that made by Mr. Scott Elder should not be made without proof. The Chairman: It is mere hearsay. Mr. Scott Elder: He won't deny he wrote a letter. Mr. Lambert said witness admitted having written. From large manufacturers and vendors they got written warranties with all their invoices, but in the case of small local traders from whom they occasionally got butter, they did not get a warranty at the time, but as soon as this allegation was made they sent up and got the warranty produced. That was how it came into their possession. Capt. Randolph would like to know how it was put. Witness said that he told Burns' that in future they wanted a warranty for all butter they got. Mr. Lambert: Did you intimidate Mrs. Burns in any way?—No. You just asked them to send up a written warranty?—Yes. Capt. Randolph: But you did not tell her a prosecution was pending.—No, I did not. Mr. Burmp, the secretary of the Society, said for the last 12 years they had not bought margarine anywhere but from the Wholesale Society. Mr. Lambert said that was his case, and he relied on the warranty given. Mr. Scott Elder replied by quoting a case in which it was decided that a warranty must be part of the contract, and obtained at the time of purchase. Mr. Lambert expected to have to meet this, and quoted the more recent cases from that court of *Elder v. Smithson*, and particularly drew attention to the judgment of Justice Wright. The Chairman said so far as he was able to judge of the Act it seemed to him that a warranty was required before or at the time of purchase to come within the terms of the Act. He simply spoke as a plain man, and that was his opinion. Mr. Lambert had every respect for his Worship's opinion, but again drew attention to Justice

Wright's judgment in *Elder v. Smithson*. The Chairman : I do not think that touches this case. Mr. Scott Elder : It was my own case, and does not touch this case at all. Mr. Lambert said the case quoted related to pure lard, but they had the dictum of the court above as to the essentials of a contract. The Chairman said unless a warranty was given at the time of purchase it did not seem to him to be of any good at all, and would render the Act simply a nullity. Mr. Lambert said he was entitled, if he proved to the justices that before the hearing he purchased with a written warranty, to a discharge. After further argument the Chairman read the judgment in *Elder v. Smithson*, and he said that it did not touch the case now before the court in any way whatever. Mr. Lambert : Very well, sir, I bow to that decision. The Chairman said the bench had had of late years several cases of a similar kind before them. Formerly they were, in his opinion, inclined to treat these cases too leniently. It was a very serious matter indeed for the public at large, who had faith in people in supplying them with what they required, especially in a case like this, where they had a body like a Co-operative Society, and with regard to whom they were naturally made to feel that everything they got from them was really what it professed to be; that the people who supplied them took all the pains necessary in order to assure themselves that what they supplied was what it was represented to be. In this case butter was sold at a shilling a pound. That price implied that they were purchasing extremely good butter without any adulteration whatever. But it turned out that quite one-half was other and different material, margarine, at all events not butter. The bench did not think they would be doing their duty to the public unless they visited a case like this with a penalty which the law allowed them to inflict. A penalty of a pound or two was perhaps sufficient in the case of a small dealer selling an article that he received in good faith from another, but here they were dealing with a large and important body with a great capital behind it, and every opportunity of assuring themselves that what they got was good, right and proper. Whatever might be the interests of other people concerned, the justices sat there as servants of the public, and to protect the latter's interests; and if anything was supplied to the public other than what it purported to be, the offence committed, should, the law set forth, be visited by a certain penalty. If the persons proceeded against held a warranty obtained before or at the time of purchase, they were entitled under the Act to relief; but in this case, in the opinion of the bench, defendants had no warranty of any kind whatever. They, therefore, inflicted the full penalty of £20. In reply to Mr. Lambert, the bench said they would, if asked, grant a case on the point raised by Mr. Lambert. The Clerk asked what it was intended to do with regard to the other two cases against the defendant Society. Mr. Scott Elder said in view of the penalty imposed in the last case, if defendants would pay the costs in the other two cases relating to margarine, he would withdraw the summonses. Mr. Lambert agreed to do so, but without prejudice.

GLASGOW CHAMBER OF COMMERCE AND THE FOOD AND DRUGS BILL.

THE Glasgow Chamber of Commerce have presented a petition to the House of Commons against Clause 8 of the Food and Drugs Bill, which declares that it shall be unlawful to manufacture, sell, or import any margarine the fat of which contains more than 10 per cent. of butter. The petitioners are of opinion, the memorial says, "that the impoverishment of margarine is unnecessary as a protection against its fraudulent sale as butter. They are authoritatively informed that the mixture of margarine and butter can be ascertained by chemical analysis, whether the addition amounts to 10 or 50 per cent. of either the one food or the other. The contention, therefore, that to limit the quantity of butter in margarine to 10 per cent. is necessary to secure a conviction under the Food and Drugs Act is wholly without foundation. Scientific

opinion has suggested to this Chamber that oleo and buttermilk may (either or both) contain butyric acid, and that in varying quantities. This point is at present unascertained; and, while it has not been apparently alluded to before the Committee, it is apparent that, if this view is correct and the amount approximates to 10 per cent. the present Bill would put a stop to the churning of margarine altogether. Your petitioners submit that Parliament would exceed its legitimate functions did it go beyond the recognised principles of legislation with regard to food, viz.:—1. That the article sold must be wholesome and good. 2. That the article must be sold as what it really is. A most important point, to which this Chamber begs the attention of your honourable House, is the effect that the proposed legislation would have upon the health of the industrial and poorer classes—specially upon the health of their children. The scarcity and dearth of milk and butter-fat is recognised by all sanitary authorities as matter of deep regret and concern, because limiting the supply of the best fatty food. If, with this existing scarcity, the annual supply of 80,000 tons of margarine used in this country—or any material portion of it—is deducted, owing to the article being by law made less savoury and palatable, a serious responsibility would fall upon the Government which legislated upon lines where even the possibility of such injury to the public health might arise. That such legislation had the merit of diminishing the fraudulent sale of the article by dishonest and unscrupulous parties would not, in the opinion of this Chamber, justify such risk. Your petitioners consider that if Clause 8 of the Bill passes into law the Act will certainly fail of its end. They are of opinion that the community cannot now be deprived of so important, wholesome, and relatively cheap an article of food as margarine, and that the public is entitled to demand and get the best margarine which producers can supply. The community is, therefore, not likely to sympathise with legislation which injures or destroys margarine. The Chamber believes the proposed law would not have public sympathy, and would not be willingly observed. On the contrary, your petitioners would expect it to be systematically opposed and evaded, tending to bring law into disrespect, and that this would especially be the case in intelligent industrial communities. During the seven years in which the exceptionally severe and restrictive legislation of the Margarine Act has been in operation, your petitioners understand there has not been one complaint of its infringement by manufacturers of margarine. If Clause 8 of the Bill becomes law, these manufacturers—failing their demand on the Government for compensation being met—would probably elect to face their ruin rather than seek to evade its provisions. In this relation your petitioners point out that the simple mechanical process of blending margarine with butter could be carried out surreptitiously by every dairy and shop throughout Great Britain, and could be carried out legally by every individual of the population for their own use. There is no informed person known to your petitioners who questions the goodness and desirability of margarine as a high-class and most valuable food. The fault of its producers appears to be that they have made it too good and too cheap. Former legislation has already surrounded the sale, etc., of margarine with restrictions that, in some respects, exceed the legislative provisions surrounding the sale of poisons. For the law to add to this a provision for impoverishing the quality of margarine appears to this Chamber to be opposed to the principles of good government. It is the opinion of your petitioners that, in the legislation proposed by the said Bill, the principles of Free Trade should prevail; and they respectfully submit that any legislative interference by Government, which, although not so intended, makes a fundamental difference to the interests of one class of producers in opposition to another, will be directly prejudicial, and will also be indirectly injurious by rendering the legal foundations of industry in this country less secure." This Chamber accordingly prays the House to decline to sanction Clause 8 of the Bill.

ON THE MILK SUPPLY OF LARGE CITIES :

DR. HOPE, M.O.H., Liverpool, in his annual report, writes:—The Milk Supply of the City of Liverpool owing to the attention recently attracted to the subject, calls for some remark.

Milk is a perfectly suitable food for certain age periods, and may be considered to be the only perfect and natural food up to six months of age. But it is only a natural food so long as it is given in the natural manner, viz., direct from the gland to the stomach of the infant. Under these conditions, it is taken absolutely fresh, at the natural temperature, perfectly mixed, and without exposure to the air, consequently there has been no possibility of its being too rich or too poor, it contains neither adulterant nor preservative, no skimming of the cream, no possibility of contamination with dirt or specific disease, and no fermentation. The milk is, in fact, bacteriologically, pure and clean, and the advantage to the infant fed in this natural manner is very great.

On the other hand, the milk of commerce, even if it comes from a healthy animal—which is too often open to doubt—is exposed to risks of contamination in many ways, from dirty udders and dirty hands of milkers, from exposure in the open buckets in dirty shippens, from strainers, pails, milk cans, and jugs, to which it must be transferred on its way to the table of the consumer, and, if it is neither skimmed nor watered, yet, after its railway journey, and after being hawked from door to door through dusty streets, it arrives in a varying degree of staleness, more or less contaminated, and loaded with microbes of various kinds, and sometimes of extreme virulence. There is a great gulf fixed between milk supplied as Nature intended it and milk which has gone through so many vicissitudes.

The aim in view in regard to cow's milk is to imitate the natural condition as closely as possible, that is, to ensure not only that the supply shall be free from intentional adulteration, which relatively is but a minor point, but that it shall be as free from contamination, or accidental or wilful impurity, as Nature intends.

There has always been a consensus of opinion as to necessity for some measures to ensure the attainment of these objects, and legislation upon the subject is not new.

The Liverpool Improvement Act of 1867 contains provisions requiring all cowsheds and dairies to be licensed and registered before they are occupied, and, when occupied, they are to be visited from time to time by an officer appointed for the purpose, with a view to ascertain that the premises are in good order, properly supplied with water, properly ventilated, and so forth.

In 1885 an Order of the Privy Council was made under the Contagious Diseases (Animals) Act, requiring that every person carrying on the trade of cowkeeper, dairyman, or purveyor of milk, should be registered by the Local Authority, and that before he commences his business he should satisfy the Local Authority that provision has been made for the lighting, ventilation, cleansing, drainage, and water supply of the premises, and for the protection of the milk therein against infection or contamination of all kinds.

This Order of the Privy Council authorised the Local Authority to make detailed regulations to give effect to these requirements.

Provisions such as these are very admirable in their way, but it is plain that what is to be regarded as "proper ventilation," &c., must be adequately defined; and, moreover, it is equally plain that the administration must be such as to ensure that the requirements of the law shall not be evaded.

It will be perfectly obvious, too, that in dealing with a subject of this kind, in which requirements increase as knowledge grows, that all the improvements desired are not to be gained in a day. Like every other good movement, time is necessary to attain the object in view, and earlier legislation, if it gave but an imperfect weapon, yet

served a useful purpose in preparing the way for regulations which could be applied with greater precision, and consequently greater effect.

In 1895, the practical administration of dairies and cowsheds in Liverpool was actually in advance of the regulations which had been framed some ten years before, consequently, with the sanction of the Local Government Board, new regulations were framed and put in force. These describe in exact terms the conditions which the cowkeeper must observe in order that his cows shall be healthy and their milk pure. These regulations are freely distributed amongst those whom they concern. The few cowkeepers who had at first shown reluctance to fall in with the requirements soon came to see that it was really to their advantage to fulfil the obligations imposed upon them, and, generally speaking, in a very short time opposition gave way to co-operation. Indeed they have from time to time made application to the Medical Officer's Department for their cows to be examined, and a few have at their own initiative obtained certificates from qualified veterinary surgeons. These facts are important and gratifying, as far as they go, as indicating the trend of opinion in the matter.

Concerning the quantity of milk supplied to the City of Liverpool, it is interesting to notice that close upon half of it comes in by rail from the country. About 11,000 gallons are brought in every day from the country, and about 12,000 gallons are produced every day from cows kept within the city. There are 435 shippens within the city, licensed for keeping 5,695 cows, the license being subject to annual renewal, and there are 892 places within the city registered for the sale of milk.

The actual supervision and administration of cowsheds and dairies engages the personal attention of the Medical Officer and his Deputy, the details being in the hands of a competent staff. The structural and general sanitary condition of the shippens is dealt with by two suitably qualified inspectors, who give their whole time and undivided attention to this work. They are not only prepared to advise in regard to any new shippon, but their business is systematically to inspect those already licensed. The shippens in Liverpool, no doubt, in some instances, may leave something to be desired; many, however, are as good as are to be found in this country, and the average is up to a very good standard.

The cows themselves are carefully and systematically examined by the Leavelookers. These men, five in number, are qualified by experience and training for the work, and they examine on an average about 500 cows every week. Any cow which is found to be out of health is at once reported to the Medical Officer, and, if necessary, the Veterinary Superintendent, Mr. Reynolds, or his Deputy, examines the animal, and applies the tuberculin test if it is thought desirable to do so.

The arrangements, on the whole, are very complete, so far as city shippens are concerned. It would be an advantage if some supervision could be exercised by the officers of the Health Committee over those country shippens which supply milk to the city, and benefits will result when further powers are obtained in regard to the localities in which new shippens may be built. Provision for more open space surrounding shippens, and for greater yard space in connection with them, is wanted, and there can be no doubt at all that the hands of the authorities ought to be strengthened to enable them to deal with cowkeepers who place obstacles in the way of the removal of diseased animals from their shippens.

With this preliminary sketch of the official methods adopted to render the milk supply a wholesome one, we turn to some considerations exceedingly important to the consumer, and which come within the scope of the domestic aspects of the question.

Apart from the harm which may result from the abstraction of the cream, or the addition of harmless adulterants, such as water, by either of which the nutritive value would be changed, milk is known to be a vehicle for the transmission of certain specific diseases. Scarlet fever

and typhoid fever, undoubtedly, and possibly even diphtheria, may be conveyed by it; but of far greater consequence even than this, is the mischief wrought by the use of milk undergoing putrefactive changes. Without going into details as to the nature of the putrefying organisms, or how they find their way into the milk, it may be stated that the direct destruction of infant life every summer and autumn from putrefying milk-foods is remarkable. The facts may be illustrated by contrasting the mortality amongst an equal number of infants of equal ages fed respectively upon the breast alone; and upon cows' milk with artificial foods, of which milk, doctored in various ways, is the basis.

As the result of a most careful and patient personal investigation, extending over several years, and supplemented and checked by the experience of members of the Liverpool Medical Institution, it is found that the mortality amongst equal numbers of infants below three months of age, fed respectively upon cows' milk with artificial foods, as well as breast milk, is fifteen times as great as it is amongst those fed on breast milk alone; or, to put it in another way, if twenty infants out of every thousand below three months of age, fed upon the breast alone, die from infantile diarrhœa, no less than 300 die out of every thousand fed upon cows' milk and artificial foods as well as breast milk, but if they get no breast milk at all, nothing, in fact, but cows' milk and other artificial foods, it would appear that the deaths of those under three months of age would increase from 20 to 440 per thousand—a number almost incredible. The enormous mortality amongst infants during the autumn months is very largely accounted for by this circumstance.

The virulent nature which milk can assume is proved, not only by these facts, but also by the investigations of the bacteriologist; thus, in investigations undertaken for quite another purpose, it was found that some samples of the milk—ordinary milk purchased in the ordinary way—proved so highly virulent as to kill the animal inoculated with it within 48 hours.

No account of mischief which may possibly arise through milk would be complete without a reference to Tuberculosis.

Tuberculosis is a disease occasioned by the growth and multiplication in the system of human beings, or animals, of microscopic organisms called Tubercle Bacilli. The disease is commonly called Consumption when it affects the lungs or the bowels, and it is, or was, frequently described as Scrofula when it affects certain other parts. It is associated, both in man and animals, with insanitary surroundings, dirt, bad ventilation and foul air, absence of sunlight, &c.

Under advancing sanitation, Tuberculosis has diminished during the past thirty years to an immense extent, and, as knowledge of its nature has become definite, measures directed against it have become more precise and more successful.

The effect of improved sanitation upon tubercular diseases in Liverpool is shown in the following table:—

	1886 to 1875.	1876 to 1885.	1886 to 1895.	1896 to 1898.
Annual Average Death-rate per 100,000 of the population, at all ages, from all forms of Tuberculosis ...	430.8	349.8	309.8	256.1
Annual Average Death-rate per 100,000 of the population above 5 years of age from Phthisis ...	362.8	278.6	244.4	207.1
Annual Average Death-rate per 100,000 of the population below 5 years of age from:—				
Tabes Mesenterica ...	637.1	597.3	530.1	383.3
Hydrocephalus...				
Scrofula ..				

We are concerned, however, here, with the fact that the cow is liable to suffer from tuberculosis—commonly of the lungs, as in the case of human beings; but, besides the lungs, certain glands, and notably the udder, may be affected. When the udder of the cow is affected with tuberculosis the tubercle bacilli, which are breeding there, flow away with the milk, and, still retaining all their activity and virulence, may enter the stomach and so infect with tuberculosis the person consuming the milk.

The real preventive remedy clearly is to aim at the root of the evil, and (1st) to have the shippens so well constructed and kept that the cows shall remain under conditions most favourable to health; and (2nd) to have them examined from time to time, at appropriate intervals, in order to ascertain that they remain healthy. An additional safeguard, which is in the power of everybody, is to boil the milk for a few seconds, or to sterilise it by raising it to a temperature somewhat below boiling point, either of which would effectually destroy all tubercle bacilli.

The sterilisation can be accomplished if the vessel containing the milk is placed in a saucepan or other suitable vessel containing water, which can be heated to boiling.

The question has been mooted as to whether or not, in the event of a cow being so dangerously affected with tuberculosis as to contaminate the milk, compensation should not be paid to the owner if he removes it. The Medical Officer has, in certain cases, advised the Health Committee to purchase, for a small sum, cows taken from a shippen for sanitary purposes, but it must be remembered that no cowkeeper who wilfully keeps a diseased animal upon his premises would have any claim to sympathy or consideration. No man has a right to sell an article which damages the health of the consumer, without duly warning the consumer of the danger that he runs. The consumer is not prepared to meet the risk in the case of milk; moreover, there is no reason whatever why the cows should suffer at all from tuberculosis; in good and sanitary shippens such a condition is uncommon, it is only in those which are badly constructed and badly kept that tuberculosis is frequent.

In contrasting the relative purity of town and country supplies, it is satisfactory to find that adulteration is not frequent in either case. In both town and country milk, however, adulteration with water is found a little more frequently in samples taken on Sundays than on other days. In regard to the presence of tubercle bacillus, a most important difference is found. It would naturally be thought that, with the very great natural advantages which the country possesses, tubercle would be less frequent in the country than it is in the town. This, however, is very far from being the case, and it is a most serious reflection upon the sanitation of country shippens that tubercle is found more than twice as often in samples from the country as it is in samples from the town; thus, out of 312 town samples, 19 or 6.0 per cent., were found to be infected with tubercle, but out of 95 samples taken at the railway stations on arrival from the country, 14, or 14.7 per cent., were found to be infected. This shows the great need for sanitation of country shippens, and shows the consumer that he should take town milk when he can get it, rather than that sent in from the country, where little or no supervision is exercised.

POISONING BY BELLADONNA PLASTER.

A CASE of poisoning by the application of a belladonna plaster is reported in the *British Medical Journal* by Dr. H. Aldersmith. He states that a clergyman procured an ordinary perforated belladonna plaster from a chemist and applied it to his back, after first rubbing the skin freely with a towel. In a few hours he could not read, and was delirious all night. Next morning well marked symptoms of atropine poisoning were displayed, and he was found by the doctor picking up "snakes" and other animals from his bed. The plaster was removed, but it was several days before the patient was able to read or do any mental work.

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Food and Sanitation.

SATURDAY, JULY 22, 1899.

SPECIAL NOTICE.

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LIPTON'S JAMS.

Seizure of Rotten Fruit at the Factory.

MR. HENRY THOMAS is to be congratulated on another important service to the community. On July 15th at Southwark, Mr. Henry Thomas, Chief Sanitary Inspector for the Bermondsey Vestry, applied to Mr. Slade for orders to destroy a large quantity of bad fruit, which was brought to the court in thirteen dust vans belonging to the vestry. The magistrate spent nearly half an hour in

inspecting the fruit, and then Mr. Thomas gave evidence as to the seizure. He said that on Friday afternoon he went to the premises of Lipton (Limited), jam manufacturers, Bermondsey. He entered the boiling-room, and saw four tubs of strawberries. One was on the weighing-machine, presumably to see what proportion of sugar was required. He examined them, and found that they were quite unfit for the food of man. He went into the stores, and found twenty-five baskets of raspberries, and in another store a large number of baskets of black currants. He had them sorted, and found 158 to be unwholesome and unfit for food. He then saw a van just about to deliver some fruit at the premises, and he examined it. There were seventy tubs of strawberries. The Chief Clerk: Were the strawberries unfit for food? Mr. Thomas: Yes. Another van drew up, containing twenty-six large tubs of strawberries. The name on the van was Lawford. I examined them, and found them to be unwholesome. Two other vans then drew in bearing the name of Briley. There were 250 tubs of raspberries, which were unfit for food. I also examined another van, which contained 166 tubs of strawberries. They were also unwholesome. The names on the vans were Israel and Joel. The Medical Officer of Health also examined them, and confirmed my opinion. I ask for orders to have them destroyed. The Chief Clerk: How many are there altogether? Mr. Thomas: 698 packages. The Chief Clerk: Strawberries, raspberries, and black currants? Yes. Mr. Slade: And they have all been examined? Yes, carefully examined. The Chief Clerk: And they have all been shown to the magistrate? Yes. Mr. Slade then made the order to destroy. Late in the afternoon Mr. Thomas again appeared at the court, and applied for orders for the destruction of a further consignment of fruit. This was conveyed to the court in three vans, each containing about seventy-five tubs, weighing, according to Mr. Thomas's approximation, about six tons. He understood that the fruit had been tendered to Liptons, but after his former seizure they refused to receive it. Mr. Slade made the formal orders for the destruction of the fruit. A gentleman, who stated that he was chairman of the fruit section of the London Chamber of Commerce, here interposed with the question: Am I to understand that these orders apply only to the fruit you have seen in the yard? There is other fruit in the vans outside, and it is in a different state to that in the yard. The raspberries are still outside, will your worship see them? The Chief Clerk: You are not a party to the application, and you have no right to address the Court. The Representative (with some warmth): I should like my observations to be taken down, because I see the Press is represented here. This is a serious case for the trade of London, and it will be discovered that this is not the first time that the inspector has been found in the wrong. Mr. Thomas (indignantly): Not me, sir. The Representative: I beg pardon, I am not talking to you, but to his worship. In my official capacity as chairman of the Fruit Trade Section of the Chamber of Commerce, I say—Mr. Slade: I tell you I cannot hear you. The Representative: The best fruit might be used for raspberry vinegar. Mr. Thomas: I wish your worship to note that it is intended to make raspberry vinegar out of unwholesome raspberries. The Representative: I beg pardon, I said nothing of the kind. I contend that his worship has nothing to do with that which he has not inspected, and it is quite within my power to use it as manure if I think fit. I shall take it away. The Chief Clerk: The order has been made.

ADULTERATED MILK OF SULPHUR.

MR. JOHN REES, chemist, 22, Church-road, Newport, was summoned before the Newport magistrates on July 14th, for selling milk of sulphur adulterated with sulphate of lime. The sample purchased by Mr. Spencer Jones, the inspector, was found to be 48.5 per cent. of the sulphate of lime. Mr. F. Lewis, solicitor, who defended, quoted from Atfield's Treatise on Chemistry that the lime was added to an even greater extent than one-half to make it

suitable to mix it with milk or other fluid. Otherwise it floated on the surface. Mr. William Johnson, assistant to Mr. Rees, described to the Bench the process of manufacture, but said that there were new and improved methods of manufacture. The sample sold was an uncommonly good one, as the low-grade manufacturers did not take the trouble to wash out the excess of lime. The Town Clerk tendered Mr. Howard Jones (medical officer of health) to prove that milk of sulphur with more than one or two per cent. of sulphate of lime was an adulterated article and injurious, as the sulphate was insoluble in the stomach. Hydrate of lime was the preparation given to young children. In one case, where the adulteration was 37½ per cent., a penalty of £5 had been imposed. The Bench were not unanimous. Alderman Vaughan stated, that as this was the first case, they imposed a fine of 5s. only.

IMPORTANT SUGAR ADULTERATION CASE.

At Farnham Petty Sessions, Frederick George Hitchcock, of Shortfield Common, Frensham, was charged on an adjourned summons with selling sugar not of the nature and quality demanded, to wit, Demerara sugar. The case had been adjourned to enable an analysis to be made by the authorities of Somerset House. Mr. F. Cliffe (inspector to the County Council under the Food and Drugs Act) prosecuted and Mr. E. Kempson defended. The evidence given at the last hearing having been read over. The Magistrates' Clerk produced and read the analysis which had been received from the Government laboratory, certifying that the sample forwarded from the last Court had been analysed and that the analysts were of opinion that the sample in question was the product of the sugar cane, and that it had been artificially coloured in imitation of true Demerara sugar. Mr. Kempson said this bore out his contention at the last Court that the sugar was cane and not beet sugar. The point really at issue between the vendor and the purchaser was as to whether they got cane or beet sugar. Mr. Cliffe said at the last Court, that if the sugar came from Mauritius and was the product of the sugar cane he should not have taken proceedings. It was an entirely different section which dealt with colouring matter. They were not charged with selling sugar coloured, so as to be injurious to health, but with selling an article to the prejudice of the purchaser, not of the nature, substance and quality demanded. Mr. Kempson was proceeding to call expert evidence to prove that all Demerara sugar is coloured, when the Chairman held that this would not be fair to the prosecution, who should also have the opportunity of calling professional evidence. The Bench, however, would be willing to grant another adjournment. Mr. Kempson consulted his client, and expressed a wish for the case to be dealt with that day. Again addressing the Bench he said it was for them to find whether the purchaser had been prejudicially affected. In the course of further argument he pointed out that Demerara was a generic term in the trade, and contended that in that case there had been no fraud intended or committed. Mr. Cliffe did not press the case. The Chairman said that the Bench felt inclined to convict, but would only impose a penalty of 2s. 6d. and costs. Mr. Kempson: I ask leave to state a case on the ground that there was no evidence of prejudice. The Chairman: Oh, yes.

WATER AT SPIRIT PRICE.

At Truro, on July 12th, Bessie Thomas, licensed victualler, Cathedral Hotel, St. Mary's-street, was charged with selling adulterated whisky. Mr. R. Dobell represented defendant, who pleaded not guilty. Chief Constable Coleman said that on the 8th June he purchased a quart of whisky from defendant, and submitted a part of it to Dr. Dyer, whose analysis showed that it contained 34½ degs. of absolute alcohol, or 27½ degs. under proof, and 2½ degs. below the legal standard. Mr. Dobell submitted that the certificate was bad on the face of it. It showed con-

clusively that Dr. Dyer had not proceeded to the statutory test, that was of Syke's hydrometer but he had ascertained the alcoholic strength by weight, and in that process, Mr. Dobell contended, there had been evaporation. Mrs. Thomas said she had kept the house for 14 years. On the 18th May she received two gallons of whisky from Messrs. Gradwell, Chacewater, and a permit which showed the whisky was 10 degrees under proof. She was entitled to reduce it to 25 per cent., and she put 1½ pints of water to each gallon. On the morning after the Chief Constable's visit the whisky was tested by Mr. R. Taylor, landlord of the Dolphin Hotel, and Mr. W. N. Earthy, who each found it to be 23·8 under proof. Mr. R. Taylor proved that he made the test with Syke's hydrometer. The Mayor said that owing possibly to carelessness in dilution and the keeping of the spirits in an unsuitable vessel the whisky was below the legal standard, and they had no option but to impose a fine of 10s. 6d. and 11s. costs, and order payment of the analyst's fee of 10s. 6d.

IMPORTANT TO FOOD INSPECTORS IN IRELAND.

At the Castlemartyr Petty Sessions on July 12th, before Messrs. A. E. Horne, R.M.; J. S. Carbery, J.P.; and T. J. Garde, a milk prosecution of much interest to all County Councils in Ireland was heard. The defendant, Michael Aherne, a farmer, residing in Castlemartyr, was prosecuted by Sergeant Haggart, R.I.C., Food Inspector at Youghal, for selling to him on the 8th ult. a pint of new milk, which, on the certificate of the County Analyst, Mr. D. J. O'Mahony, Cork, was proved to be deficient in fat to the extent of 40 per cent., the chairman remarking that it was the lowest class of milk he ever saw in court. In reply to Mr. Keane, solicitor, Youghal, who defended, the sergeant said his appointment as Food Inspector was from the late grand jury of the county. Mr. Keane then contended that the written appointment produced invalidated the prosecution, inasmuch as that by the 15th Section of the Local Government Act, 1898, the office of Food Inspector was not mentioned or included in the list of public offices which were by that section transferrable to the County Councils from the grand jury, and not being now appointed by the Cork County Council the complainant was not entitled to prosecute as Food Inspector. Messrs. Carbery and Garde, two of the justices on the bench, considered that Mr. Keane's contention was right, but Mr. Horne, R.M., dissented, and the case was accordingly marked dismissed. The chairman to the complainant—Represent the matter to your authorities and they may get the opinion of the Law Adviser on the point raised.

GOLDEN SYRUP ADULTERATION.

At Truro, on July 12th, William Richards, grocer, Lemon-street, was summoned for selling golden syrup or treacle not of the nature, substance, and quality demanded, but adulterated at least 60 per cent. with glucose syrup. Mr. R. Dobell, who appeared for defendant, said Mr. Richards pleaded guilty to having committed a technical offence. The old style of selling golden syrup out of a cask by means of a tap had gone out, and it was now sold in tins, but Mr. Richards had some customers who liked to have it from the cask; therefore he bought 20 lbs. or a cisternful at a time. He bought it from Messrs. Norton and Co., who got it from the Golden Syrup Co., Glasgow, and they assured Messrs. Norton and Co. verbally that it was a compound complying with the Food and Drugs Act. Their workshops would know from the respectability of Mr. Richards and Messrs. Norton and Co. that they would not allow anything to be done to the injury of anyone in the city, and they were absolutely ignorant of the compound of the syrup, and he was instructed to express their deep regret that anything should be put upon the Truro market which would not comply with the requirements of the legislature. It was impossible to manipulate this syrup

after it left the manufacturer's hands, and he therefore asked their worships to treat the case as a technical offence. Chief Constable Coleman said he submitted 2 lbs. of treacle, purchased from Mr. Richards, to Dr. Bernard Dyer, whose analysis showed that the sample contained not more than 40 parts per cent. of syrup derived from sugar or treacle, and at least 60 parts per cent. of glucose syrup. He observed that the admixture of glucose was at least 40 per cent. in excess of what was ordinarily, though not necessarily, included in manufactured golden syrup, for the purpose of preserving its clearness, and of preventing its crystallisation, but glucose was not injurious to health. The Mayor said perhaps Mr. Richards had not taken the care he ought to have done in getting a guarantee that the article complied with the Food and Drugs Act, but the justice of the case would be met by a fine of 10s. 6d. and payment of 10s. costs, and the analyst's fee of 10s. 6d.

MILK ADULTERATION.

Getting at the Farmer.

BEFORE Sheriff Boyd, at Dundee, on July 12th, John Pollock, farmer, Carrickstone Farm, Cumbernauld, was found guilty of several charges of forwarding milk which contained certain percentages of added water to a dairyman in Garngad Road, Glasgow, with whom he had a contract. The Sheriff said the consignee—the Garngad dairyman—had taken adequate means to protect himself, and if only more dealers in the city would insist upon guarantees, there would be less adulteration and very much greater safety for them. Hardly any defence had been suggested. It was said that milk was not adulterated by accused or by those for whom he was responsible, and that perhaps milk might have been abstracted in transit and water added. That was in the first place not a fair suggestion, and in the second place it did not shift responsibility from the consigner, because he ought to have taken precautions against anything of that sort being done. It was always satisfactory, added his Lordship, when the fault could be traced home to the farmer. The penalty would be £4 for each offence—£20 in all—with £7 12s. 8d. expenses.

CREAM OF TARTAR AND ALUM.

At the Trinity (Gloucester) Quarter Sessions, recently, James Clay, *alias* Thomas Lume, *alias* Clayton, 59 years of age, and described as a confectioner, was charged with having, on May 31st, at Stroud, obtained a cheque for 10s. by false pretences from Harry Hathaway, with intent to defraud. He was further charged with having obtained 14s. 6d. by false pretences from Ann Holdar at East Dean on May 26th. In stating the case of the prosecution Mr. Morton Brown said that the whole circumstances laid before him suggested that what was really a very clever fraud had been committed by accused. On the evening of May 31st prisoner went to the shop of Mr. Hathaway, who was a baker in Moor-street, Stroud, and said he had in his possession a substitute for cream of tartar. The substance, Mr. Brown reminded the jury, was rather an expensive article, and it had often been sought to obtain a substitute which would have the same effect and would not be so costly. After making his statement to Mr. Hathaway, prisoner proceeded to demonstrate to him some of the effervescing powers of the article he wished to sell. At his request Mr. Hathaway procured a glass of milk and some bicarbonate of soda, and into this prisoner put a white powder which he represented as being his substitute for cream of tartar, with the result that there was a good deal of effervescence. Having shown by experiment what the powder could do, prisoner told Mr. Hathaway that he had called on Mr. Murphy, in King-street, and that that gentleman had tried not only an experiment with milk and bicarbonate of soda, but one with a small batch of scones and cake, and was so pleased with the result, and satisfied with information he had obtained from prisoner about the wonderful substitute for cream of tartar, that he declined to charge him for his lunch, and also gave him a sovereign.

After stating that he had obtained other "testimonials" from other people in the district, prisoner went on to tell Mr. Hathaway how the proprietors of Coomb's Eureka Flour had purchased this receipt from him. Mr. Hathaway asked prisoner to leave a sample of the chemical, as he thought it advisable to test it for himself in the making of some cakes before he gave any money for it. This prisoner declined to do, stating that if he did so people would get the powder analysed and learn the secret without paying anything for it. Thereupon Mr. Hathaway gave the prisoner a cheque for 10s., and for this the prisoner left a paper which contained some writing. Mr. Hathaway then took the paper to Mr. Coley, chemist, in order to get "the prescription" made up and received a parcel, which was labelled "alum." Alum, said Mr. Brown, contained some of the properties of cream of tartar, but the law prohibited bakers using it in their trade. Mr. Hathaway, on being supplied with the alum, saw that he had been "done." That, however, was not the whole of the alleged fraud, because in the little experiment the prisoner tried with the milk and bicarbonate of soda, he did not use alum at all, but cream of tartar, and it had been subsequently discovered that what prisoner had said about Mr. Murphy was false. Evidence having been called in support of the prosecution, Mr. Hutton, for the prisoner, submitted that the evidence did not support some of the counts of indictment alleging false pretences. Prisoner, in the course of his evidence, stated that his name was Thomas Clayton, and stated that the prosecutor had made a mistake in putting clay on the cheque. He wrote the words "Pure alumin powder and lasite" on the paper he handed to Mr. Hathaway. Part of the paper had since been torn off, for the "r" of powder was missing, as well as the word lasite. The powder which he took to Mr. Hathaway was composed of alumin powder and lasite. In the course of cross-examination prisoner stated that he used to be in business as a baker in Earlstown, Lancashire, but denied that he there passed under the name of Clay. Asked why a respectable tradesman should swear, as one witness in the case did, that he did not pay anything for the recipe if he did, prisoner replied, "Confectioners do not tell people in the Court what they put in their goods." (Laughter.) "Lasite," he said, "was a substitute for cream of tartar, and could be obtained of any wholesale chemists. Bakers were allowed to use alumin powder if they liked; at least he had used it, and never been prosecuted." "But," said Mr. Morton Brown, "you knew you were exposing Mr. Hathaway to the risk of prosecution." "Not," said prisoner, "if he did not use it." (Laughter.) The jury, after a brief deliberation, returned a verdict of "Guilty," whereupon it was intimated that it was not intended to proceed with the other charge against prisoner, on which a verdict of "Not Guilty" was taken. The Chairman, in delivering sentence, said the case was one in which there had been a great deal of premeditation and design on the part of the prisoner, and not one of a sudden yielding to temptation which had been placed in his way. The sentence would be six month's imprisonment with hard labour.

AN IMPUDENT MARGARINE FRAUD.

At the Bradford City Court, before Mr. C. Sidmore (Stipendiary Magistrate), Mr. J. Moser, Mr. Jessie Wood, Mr. J. W. Monckman, and Mr. S. Jackson, Bernard Boland, of 226, High-street, Great Horton, and James Boland, of 705, Manchester-road, were summoned under the Food and Drugs Act of 1875 for selling butter not of the quality, substance, &c., demanded by the purchaser. Mr. Brayshaw (Associate of the Sanitary Institute, and Inspector under the Food and Drugs Act), proved having sent into the defendant's shop on June 19th, assistants for 7 lb. of butter, and for which 10d. and 9d. were paid respectively. The City Analyst's certificate was put in which proved that the samples purchased consisted entirely of margarine. Mr. Durrance, acting for the defendants, admitted the facts of the case, and stated that the defendants, who were two

young Irishmen, usually got their supply of butter from Ireland. The stuff in question was purchased as butter in Bradford as the defendants had run short of stock. The defendants were each fined £2 and 10s. costs, the Stipendiary Magistrate remarking that the maximum penalty was £20. The Inspector stated that he had had many complaints about this butter, and that he had been at considerable trouble in procuring an official sample, although he had taken (by assistants) several test samples, which also proved that it was simply margarine.

VINEGAR FRAUDS.

At Marlborough-street Police Court, W., James Pass was charged for adulterating vinegar with 50 per cent. of water. Mr. Hitchings prosecuted on behalf of St. James's Vestry. Inspector Cope deposed that he went into defendant's shop on May 31st, and purchased the vinegar for the purpose of analysis. The certificate (produced) stated that there was 50 per cent. of added water. Defendant was fined £3 and costs.

MORRELL, 37, Carnaby-street was summoned for selling vinegar containing sulphuric acid. Mr. J. P. Grain appeared for the defence. Inspector Cope seated that on June 3rd, he asked for a pennyworth of vinegar. Dr. Edmunds said he found sulphuric acid in the sample. It was not an ingredient of vinegar, but was added in place of acetic acid. It was injurious to health. Mr. J. P. Grain: Do you know Allen's "Commercial Guide"—a valuable work which states that one gallon of sulphuric acid is permitted by law to 1000 gallons of vinegar? This addition is not necessary. Mr. B. E. Reina Newlands, F.C.S., P.S.A., said he was absolutely certain that there was no free sulphuric acid in the sample. Mr. Leo. Taylor, public analyst for Hackney and elsewhere, said he quite agreed with Dr. Newland's report. The Magistrate adjourned the case for six weeks in order to send a sample to Somerset House for the purpose of finding out whether the vinegar contained free sulphuric acid or not.

UNSOOUND TINNED LOBSTERS.

THOMAS HARPER, of Stoney-lane, Houndsditch, was summoned, at Lambeth Police Court on July 13th, to answer the complaint of the Lambeth Vestry, that he on the 28th of May last sold to a Mr. C. Cullum twenty-three tins of lobster which were then unsound and unfit for food. Mr. G. Smith appeared in support of the summons. The evidence showed that the defendant on the 29th May called at Mr. Cullum's shop in Flaxman-road, Brixton, and sold him twenty-three tins of lobster, which turned out to be bad. Mr. Cullum communicated with the vestry, and Inspector Gavin seized the tins and had them condemned at this court. In his evidence Mr. Cullum said the defendant called upon him as a traveller and represented that he was acting for Messrs. Sinclair, Patterson and Co., of Mark-lane. When the witness found the goods were bad he returned them to that firm, but they came back to him. In answer to the defendant the witness said the tin he opened when the goods were delivered was good. The defendant gave evidence on his own behalf, and said he was a traveller for Messrs. Sinclair, Patterson and Co. These were their goods. Answering the Magistrate, he said he could not say why when the goods were sent back to Sinclair, Patterson and Co. as bad they were not kept. Mr. Smith: As a matter of fact does Sinclair, Patterson and Co. exist at all? The defendant: Most decidedly. Mr. Smith: Have they got an office in Mark-lane? The defendant: Yes; to receive communications. Mr. Hopkins ordered the defendant to pay a penalty of £10 and costs.

THE DEBATE ON THE SALE OF FOOD AND DRUGS BILL.

ON the question that the Bill, as amended by the Standing Committee, be now considered in the House of Commons on July 17th.

Mr. Strachey (Somerset, S.) moved, as an amendment, that the Bill be considered "on this day three months." He said that he moved this amendment on the ground that the Bill did not sufficiently guard the interests of the consumer and producer, and only to a slight extent prevented dishonest dealing. The Bill had been slightly improved in two respects by the Grand Committee, but those improvements had been carried against the Government.

Dealing with the colouring of margarine and the opinion of traders on the subject, he urged that the Bill would do nothing to protect the consumer from having margarine foisted on him by rogues when it was coloured to resemble butter. The Manchester Chamber of Commerce had unanimously condemned the colouring of margarine, and so had the Manchester and Salford District Grocers' Association. He advocated the rejection of the Bill, principally in the interest of the consumer. While it was probable that there might be a few individuals who liked to have their margarine coloured like butter, he denied that this was the attitude of consumers as a whole. Upwards of 288,000 members of trade unions had expressed the opinion that it would be a fraud on the consumer to allow margarine to be coloured like butter, and the agricultural classes of Somerset believed that the Bill would be of no use to them. The only persons who wished margarine to be coloured were the margarine manufacturers, who were thus enabled to get a higher price for their produce. He concluded by moving the rejection of the Bill.

Mr. Warner seconded the amendment.

Mr. James Lowther said he was at a loss to understand how the Government had taken up this subject of the colouring of margarine to resemble butter. If there was one subject more than another which united the agricultural community it was this question. As to the colouring of one article to resemble another, he said no one was allowed to gild a shilling and pass it off as a sovereign, and he failed to see why any person should be allowed so to disguise one article of food as to induce persons to mistake it for another. That was a direct encouragement to fraud.

Mr. Kearley (Devonport) defended the President of the Board of Agriculture against the strictures of the hon. member for South Somerset. The right hon. gentleman had faithfully carried out his pledge to the Grand Committee that he would be quite prepared to accept any amendment that would strengthen the Bill, and yet his hon. friend proposed to take a course which was tantamount to the rejection of the Bill. He pointed out the various strong provisions which had been introduced to secure the enforcement of the Act, and said the Government had done well in the matter and he intended to give them his consistent support.

Mr. Long was astonished to hear an hon. member claiming to represent the agricultural interest say he wished to see the Bill rejected because it did not contain a prohibition of colouring. The abuses which had crept into the sale of food and drugs were largely owing to lax administration of the law or no administration at all on the part of local authorities, but he ventured to say, speaking with full knowledge and responsibility, that if the department got the increased powers conferred by this Bill they should be able in no long period of time to deal successfully with the greater part of the offences. On the question of colouring, he was prepared to justify his view that he would be unjust to introduce a prohibition of colouring in relation to one article of food while leaving all others untouched. If such a prohibition were introduced, it would do little good in reducing the competition between margarine and butter, while it would interfere materially with the production of an article of food which was wholesome and ought to be within the reach of those who desired to consume it. The colouring had nothing to do with price. The only effect of the prohibition of

colouring in margarine would be materially to interfere with the production of a very valuable article of food, which ought not to be interfered with unless it was injurious to health. (Hear, hear.)

Sir J. Leng said he was opposed to this Bill on diametrically opposite grounds to those which had been addressed to the house. He opposed it because it betrayed an almost insane hostility to an innocent, wholesome, and nutritious article of food, and because he regarded it as a triumph of the delusion of agriculturists as in the best way of benefiting themselves. (Hear, hear.) He had sat on the Select Committee on the adulteration of food products and also on the Standing Committee on this Bill, and it was clear from what he saw and heard that the representatives of the agricultural or butter interest, as distinguished from the margarine interest, were united in an endeavour, if possible, to proscribe margarine as an article of food, or to surround the sale of it with such pains and penalties that the ordinary trader would be debarred from dealing in it. (Hear, hear.) This Bill had been forced upon the Government by agitation; but no sooner was it introduced that it became apparent that it was a great disappointment to those who had pressed for it. Attempts had been made in Committee to prevent the colouring of margarine, but the President of the Board of Agriculture had resisted those attempts—and he hoped he would resist them to the last—recognizing that a large branch of perfectly legitimate trade would be in danger. (Hear, hear.) The Act of 1887 contained the most stringent regulations. If they put the smallest percentage of margarine into butter the whole had to be sold as margarine. What they said was that the Act of 1887 was quite strong enough, its penalties heavy enough, and that it would be found sufficient if duly enforced. In clear cases there was no difficulty in obtaining convictions under the existing law. He contended that it was a delusion on the farmer's part that margarine was his greatest enemy in the matter of competition. The importation of butter, foreign and colonial, had more than doubled since the Margarine Act was passed. (Hear, hear.) From Denmark and Holland there had been a large increase in the import of butter, and they were very careful in those countries to exclude the suspicion that their butter was mixed with margarine. In was the same in the colonies, where they had established a high order of merit, and they wished to maintain it. These foreign and colonial countries sent their butter, not in dribblets, but in great quantities. As to foreign margarine, there had been a steady decrease of the imports since the Act of 1887, but at home there was almost an equivalent increase in the manufacture of the article. There were grave objections to the Bill in its amended form. Clause 8, which restricted the amount of butter-fat in margarine, was particularly obnoxious. The Chambers of Commerce of Edinburgh, Glasgow, Leith, and Dundee had all petitioned that House against its provisions, which, it was asserted, would prove the destruction of the margarine trade. The clause, in his opinion, was altogether contrary to the principles of enlightened legislation, and should be amended. The denial of the right of trial by jury to those who were subjected under the Bill to very heavy fines and imprisonment was another grave objection to the measure. He hoped the House would not, for the first time, subject traders, who might in certain circumstances be quite innocently led into breaches of the proposed statute, to what would mean absolute ruin to them. (Hear, hear.) He trusted that in dealing with the questions involved in the Bill the House would have regard to all the interests concerned, and not be guided solely by consideration for the agricultural interest or for the interests of a section of dealers in butter. The expenses to which an imported article was subjected before being placed on the English market surely afforded sufficient protection to the English farmer. Let the farmers of England imitate the farmers of Scotland and deluded members of the Manchester Chamber of Commerce take example from the action of the Chambers of Commerce of Edinburgh and Glasgow.

Sir W. Foster said the discussion had drifted into references to producers and manufacturers, but little had been said about consumers, who above all were interested in the Bill. (Hear, hear.) Much the Bill would do to protect the consumers against frauds injurious to health or pocket. Even if nothing but the third clause survived a great step in advance would be made in the direction of making our adulteration laws effective. Considering the amount of new matter introduced since the Bill received its second reading, and the important changes made in Standing Committee, this discussion was justified: but he hoped his hon. friend would not persist with his motion.

Sir T. Esmonde (Kerry, W.) said though he somewhat sympathized with much that had been said in support of the amendment he could not vote for it for the Bill contained many valuable provisions he would like to see extended to Ireland. Generally throughout Ireland there would be great disappointment that the grievance of the Irish butter trade had not been met. Irish manufacturers were not in the least afraid of honest competition, but they had to meet unfair and dishonest competition so long as margarine was allowed in colour to imitate butter. If margarine was as good, as wholesome, as nutritious as some of its patrons maintained, let it be sold under its natural colour, not made to deceive customers under the appearance of butter.

Mr. Lough said the interests of consumers who had small purses ought to be considered as well as the question of fraud. He did not think Parliament had progressed in its treatment of this question. The Act of 1875 dealt with food broadly. But in 1887 they had a bad measure which was full of margarine, and now they were to have another. He was sick of margarine. (Laughter.) He did not know anything at all of it consciously, but probably he had eaten it if it was as good as gentlemen on the front bench said it was. The House was dealing with national interests, and should therefore try and embody in the Bill principles which should apply to all articles. The interests of rich and powerful classes were protected in the Bill. (An hon. member.—“No. no.”) He had only to name the agricultural interest and the interests of the Butter Association. Margarine appeared to be an honest article and a useful food, but it got no fair-play in this Bill. There was nothing about the honest man in the Bill at all; it was aimed entirely at the fraudulent person. (Loud laughter.) The Bill was full of administrative confusion, and if a second examining authority were introduced at the port of entry it would result in articles getting through without examination. Articles of Food should be examined at the port of entry by the Customs authorities, with whom there should be no interference. The Bill made an invoice a warranty, but actually did not define what an invoice was. An invoice was usually written by the worst-paid clerk in a commercial establishment, and yet hereafter it would as a warranty bind the firm. There should, moreover, be a limit of time fixed during which action could be taken on the warranty. The right hon. gentleman in charge of the Bill had put down some amendments, but it would be better to withdraw the Bill altogether at that late period of the Session. (Hear, hear.)

Mr. Lambert, referring to the hon. member's complaint that there was nothing in the Bill about honest people, said of course the Bill was aimed at fraudulent people. (Ministerial cheers.) The hon. member had made an Irish bull, he had said that he was sick of margarine, but had never consciously tasted it. (Laughter.) That kind of argument was rather difficult to refute. The hon. member for Dundee was very severe on the Bill because it proposed to inflict imprisonment, but that penalty was only brought in on the third offence, and then at the discretion of the magistrate. It was a curious fact that the imports of butter from Holland were increasing, that country being the principal seat of the margarine trade. Holland exported 90 per cent. of margarine to this country, and the increase of butter from that country had

gone up 40 per cent. since 1895, and the suspicion was inevitable that a considerable amount of this margarine was imported in the shape of butter. That they hoped to stop by this Bill. He should support the Government because, though the Bill did not go far enough, it was better than no Bill at all.

Sir C. Cameron (Glasgow, Bridgeton) strongly opposed the Bill, especially in regard to Clause 8, which restricts the manufacture or sale of margarine, the fat of which contains more than 10 per cent. of butter fat. He stated that the Corporation of Glasgow, the Scottish Wholesale Co-operative Society, and the Lanarkshire County Council were all opposed to this clause. He said this prevented the sale of a superior article and compelled people to buy an inferior one, and he ridiculed the notion that if there was more than 10 per cent. of butter fat in margarine it was impossible to detect fraud. The more butter there was in margarine the better.

Mr. Burns (Battersea).—Why not all butter?

Sir C. Cameron.—Certainly. Why not all butter if sold as butter, but why not a mixture if sold as a mixture? He protested against special legislation for a special class. The Bill did not deal with the subject in a comprehensive manner. Instead of laying down general principles, the Bill gave to the Government a blank cheque in regard to Orders in Council, and while retailers were attacked, wholesale dealers were left untouched. The Bill contained several improvements which had been forced on the right hon. gentleman in Committee, those amendments being accepted by the Government with reluctance. On the whole, he would support the amendment if pressed to a division.

Mr. Kilbride (Galway, N.) denied that the Government had been coerced by the representatives of agriculture to bring in this Bill. It had been brought forward because of the admitted fraud which the existing state of the law was not sufficient to hinder, and in the interest of the honest traders. He knew no other article of food which could be rendered so unrecognizable by colouring as margarine. He denied that they wanted to kill the trade in margarine, which was a very wholesome article of food. They were acting in the interests of the consumer. The Bill contained many valuable provisions, and was a considerable advance on the law as it stood. Let them see how it operated, and if its provisions were not sufficient to prevent frauds a stronger case than ever would be made out for stopping the colouring of margarine.

Mr. Power (Waterford, E.) pointed out that margarine could be bought at 4d. per lb. and sold at 8d. per lb., so there was a great inducement to fraudulent trading. Tons of margarine bought at 3½d. and 4d. per lb. were sold to the poor as butter, and margarine coloured was palmed off on the poor as butter and the price of butter paid for it. If was impossible to detect the difference, and in the interest of the farmers, who were seriously injured, and the consumers the Government ought to take steps to stop these frauds. The Bill did something in that direction, but did not go far enough.

The motion for the rejection of the Bill was then negatived.

On the return of the Speaker, after the usual interval, the House proceeded to consider the Bill.

Sir C. Cameron moved the adoption of the following new clause:—"When an employer is charged with an offence under this Act, he shall be entitled, upon information duly laid by him, to have any other person whom he charges as the actual offender brought before the Court at the time appointed for hearing the charge, and if, after the commission of the offence has been proved, the employer proves to the satisfaction of the Court that he has used due diligence to enforce the execution of the Sale of Food and Drugs Acts, 1875 to 1899, as defined by this Act, and that the said other person had committed the offence in question without his knowledge, consent, or connivance,

the said other person shall be summarily convicted of such offence, and the employer shall be exempt from any penalty." It was quite right that a man should be responsible civilly for every act of his employee, but there was no precedent for a criminal responsibility being fixed on one man for the action of another. This Bill proposed to treat an offence in the sale of food and drugs as a crime for which a man could be sent to prison, and unless the new clause he proposed was added to the Bill an employer might find himself sentenced to three months' imprisonment with hard labour for the act of an *employee* for which he was not responsible and for the prevention of which he had used due diligence.

Mr. Long opposed the amendment. Under the 16th clause a person guilty of a breach of the Act was liable to a fine of £20 for the first offence, of £50 for the second offence, and of £100 for the third offence. But in the case of the third offence, if the offence, in the opinion of the Court, "was committed by the personal act, default, or negligence of the person accused," imprisonment for three offences might be imposed if the Court considered that a fine would not meet the circumstances of the case. The master was therefore only liable to imprisonment for the third offence. It was the master who would receive the benefit of these repeated evasions of the Act, and it was the master and not the servant—perhaps a boy earning a few shillings a week—who should be held responsible. In the interests of fair play the House ought to adhere to the Bill as it stood, which provided that a master should be liable for the offence of his servant, but which guarded the master against the risk of unjust imprisonment.

Mr. G. Whiteley (Stockport) said the Bill as it now stood was a good Bill, and was considered by the Committee as a compromise between a vast number of conflicting interests. He, therefore, thought that only drafting amendments should be accepted by the House.

Sir W. Foster said he did not want to injure or imperil the Bill by the introduction of unnecessary amendments, but it did seem to him to be somewhat hard that a man should be liable to severe penalties through the action of a malicious *employee*. He believed that in the working of this Act cases might be found which would justify the position taken up by the hon. baronet.

Mr. Pickersgill (Bethnal-green, S.W.) said the House was not bound by the conclusions at which the Grand Committee had arrived. While he thought the Bill was a little too stringent, he did not think the particular part of it against which this amendment was directed was open to objection; and they would be reducing the Bill to a condition of futility if they adopted the amendment.

Mr. Bartley (Islington, N.) said he had a similar amendment on the paper. It did not seem to him to be right that in a case where it was proved that the offence was committed by another man the Board should not be allowed to convict the absolute offender.

The Solicitor-General (Sir R. Finlay) said the employer was only liable to imprisonment in regard to the third offence, and where that third offence was shown to be due to the personal default of the employer.

Mr. Evans opposed the amendment on the ground that it would introduce a new and very objectionable principle into a criminal law.

The amendment was negatived without a division.

Sir C. Cameron moved the insertion of the following clause:—"The provisions of the Sale of Food and Drugs Act, 1875, shall apply to and include every wholesale trader or manufacturer of any article of food or drug who shall sell to the prejudice of the purchaser any article of food or drug which is not of the nature substance, and quality of the article demanded by such purchaser; and the 17th section of the said Act shall be read as if the

words 'whether by wholesale or' were inserted between the words 'on sale' and the words 'by retail' in the said section." His object was to put the wholesale dealer in the same position in regard to the taking of samples as the retail dealer. As a seizure at the port of entry would be more effective than the prosecution of a hundred petty hucksters, so would a prosecution of a wholesale manufacturer.

(To be continued next week).

A WEIRD ASSORTMENT IN CHINESE FOODS.

AN uncanny fascination lingers about the Celestial Food Show which is one of the principal exhibits at the Chinese Fair, now being held in the Grand Central Palace (says the "New York Tribune"). More than a hundred specimens of dried fruits, vegetables, fish, preserves, and other "delicacies," each of which has been thoughtfully labelled for the instruction of the visitor, are arranged upon a large stand in the centre of the main room. Few of the articles have any resemblance to anything that a Caucasian has ever eaten, and this makes them the more interesting, though the appearance of most of them is not such as to inspire any great degree of enthusiasm about adding them to one's bill of fare. The inscriptions accompanying the specimens are given here literally, just as they were copied, and it will be admitted that they show an earnest endeavour to inform the public correctly regarding the various kinds of food. For example, upon a can of what many people would call Li Chee nuts—for they have already found favour outside of the Chinese quarter—is this information, evidently intended to correct a popular mistake:—

Li Chee is not nuts, but a juicy fruits that grow on big tree, it meat is white, juicy, and full of flavours.

"Freshly canned."

A sticky, dark-coloured little dab of something on a saucer is marked—

"Spiced orange peel.

Use as luxurious."

A similar portion in another dish is said to be spiced crab-apple, and the same direction is given regarding its use. Here and there among the other articles of food are occasional dishes which are also to be employed "as luxurious." A dish of decrepit-looking yellow mushrooms bears that name, and below it the explanation—"Souping and Chop Suey Stuff." Plenty more "souping stuff" is to be found in the collection, notably a big bunch of seaweed, matted together and black as a hat. It is presumed that another tangled mass which resembles black, curled horsehair is also to be made into soup, as it is difficult to see how it could be swallowed in any other form. It is labelled—

"Coon's Hair rock moss.

Grow on top of Rock upon high mountain."

There are "Soup cases, made from tea berries and rice shells," "Kum Kwat fruit," and "Preserved Wong Pee," the latter two possessing at least the merit of attractive, mysterious-sounding titles. Among the many kinds of tea, that known as "Soy Sen" is described as "Tea that grow upon peak of the mountain that perpetual covered with fog."

A CELESTIAL RESTAURANT.

On a large plate are four or five black objects that look precisely like potatoes which have been roasted in the ashes of a wood fire. They are, however, according to the label, "Pickled ducks' eggs, salted and covered with rice straw ashes." More peculiar-looking still are the "Ducks' pads," which also appear to have been pickled and dried. Fish, a favourite diet with the Chinese, is represented by a variety of specimens. A big sea eel, a rough, spiny shark's fin, and sea shrimp of numerous sizes and colours are all dried, but not wholly divested of their odour, which keeps observers at a respectful distance. These are only a few

of the articles taken at random from the table collection, but in the Chinese restaurant connected with the Fair there is an extensive menu, from which visitors may select almost any of the dishes popular in China town. The best known of the various kinds of "chow" or food offered is, of course, "chop suey," a stew of duck and chicken giblets, young bean shoots, celery, and sometimes mushrooms. Then there is "kai tong," or roast chicken; "tahn ping, or egg omelet, and "ho tong," or dried oyster soup. Some of the less common dishes are "mo ku pok op"—pigeon with mushrooms—and "chu koek ho chee"—pigs' feet with oyster sauce. Two of the most expensive orders that can be given are for "yen wu," or bird's nest soup, 1.50 dol. a plate, and "gai see ye chee," a soup of chicken and sharks' fins, which never costs less and sometimes more than 2 dols. a plate. One of the cheapest dishes on the list is "chu yok su meen," a name which has been Americanized to "Yakuman" and "Yockaman," in which forms it is more familiar. "Yakuman" is merely a soup of meat and vermicelli, costing 10 cents. a plate. Plenty of tea; "fahn," or boiled rice, and "soy," a sauce used upon almost everything, are served with all orders. When an elaborate dinner is called for "no my tzow," or rice wine, is also served in cups—*St. James's Gazette*.

SOME QUEER DRINKS.

Of the many extraordinary drinks regularly consumed, the blood of live horses may perhaps be considered the most so. Marco Polo and Carpini were the first to tell the world of the practice of the Tartars and Mongols opening the vein in their horses' necks, taking a drink and closing the wound again. As far as can be seen, this has been the practice from time immemorial.

There is a wine habitually consumed in China which is made from the flesh of lambs reduced to paste with milk, or bruised into pulp with rice, and then fermented. It is exceptionally strong and nutritious, and powerfully stimulating to the entire physical organism.

The Laplanders drink a great deal of smoked snow-water, and one of the national drinks of the Tonquinese is arrack flavoured with chickens' blood. The list would be scarcely complete without mention of absinthe, which may be called the national spirituous drink of France. It is a horrible compound of alcohol, anise, coriander, fennel, wormwood, indigo, and sulphate of copper. It is strong, nasty, and is in every way a moral and physical poison.—*Lig. Tr. Rev.*

THE VALUE OF CONCENTRATED FOODS.

In the second Baillie lecture, delivered at St. George's Hospital, by Dr. W. Howship Dickinson, on the 18th ult., the subject of "Concentrated Foods" was dealt with by the lecturer in the following terms:—"I might take a short chapter like that 'Concerning Snakes in Iceland,' and say that there are no such things. For 'human nature's daily food' are required certain weights of nitrogen, carbon, oxygen, and hydrogen which are ultimate forms of matter and not capable of concentration or further reduction to essential principles. An ox cannot be got into a teacup by any other process than by leaving the greater part of the animal outside. The stomach of the average man demands every twenty-four hours twenty-one grammes of nitrogen, or about three-quarters of an ounce; 307 grammes of carbon, or about eleven ounces; twelve grammes of hydrogen, not quite half an ounce; besides sulphur and salts. This is required to make up for the waste—to restore what leaves his body in various shapes. Three-quarters of a pound of carbon cannot be got into less than three-quarters of a pound. The nutritive effect cannot be separated from the bulk. The man must have his pound of flesh. He has to find fuel and to replace waste—charcoal to burn and nitrogen for repairs. If he does not get the necessary poundage he will dwindle, peak, and pine. His account of profit and loss must be adjusted according to weight. A drachm of Liebig's extract cannot

supply more than a drachm. Quality cannot supply the place of quantity. The chief nourishers of life's feast are not creatin and creatinin, but albumin, myosin, fat, gluten, starch, and sugar. None of these are capable of being administered otherwise than in their natural bodies and corporeal bulk. A sick person who is presented with Valentine's food in teaspoonfuls when he should have milk in pints has as much right to complain as I should have if I were to ask for a steak in the luncheon-room, and be put off with a minute quantity of Liebig out of the shop. I might object that whatever the virtues of the Liebig it was not filling at the price. But we cannot reckon concentrated extracts as entirely useless, though they are not, properly speaking, food. They contain little or no albumin—some little, some none—no fat, and of the vegetable carbohydrates none. They contain salts and extractives which may be accessories to food, but are not food itself. Perhaps they may be regarded as complementary or supplementary to the essentials of food, and may in special circumstances have special use. I have long been in the habit of using them to help to make up for the loss by suppuration, and so prevent or retard the consequent lardacity. So far as pus carries off the salts meat extracts cannot fail to supply the means of replacing them. These extracts are, of course, only to be employed as superadditions to a diet abundant in other respects, not as substitutes for any part of it. They cannot take the place of nutriment in bulk. Beside their power of supplying salts and extractives which under special circumstances may be wanting it is supposed that they have some stimulant action. But the utility of concentrated foods has been greatly exaggerated in practice; they are additions to the essential diet, not substitutes for it. It is possible that a pennyworth of milk may be worth more to the patient than a shillingworth of Liebig's extract."—*Lancet*.

BORAX IN EXPORTED MEATS.

BEFORE the Senate Pure Food Investigating Committee, at one of its sessions in Chicago, Mr. Robert T. Lunham, of the Lunham Packing Company, talking of preservatives in packed meats, said the export of meats was insignificant until borax was employed. The use of that chemical is now universal among the packers of meat for export. After the meat is cured in salt, the borax is applied at the rate of five to seven pounds to a 500-pound box of bacon.

The English did not like the meat when shipped without borax. A slime forms on such meats, and it is too salt. There is no secret about the use of borax. Mr. Lunham did not think the meat absorbed any of the chemical.

The effect of a law prohibiting the use of borax in packing meats would, in his opinion, bring the business to a standstill.

Centuries ago their forefathers cured meats without the use of borax, which were unexcelled for texture and flavour; but the process required more time and care than the newer methods, which may have all the merits claimed and be harmless. Let meats preserved with borax be so labelled, and the people will decide very quickly as to whether the meat is wholesome and such as they want.

TEA AND DIGESTION.

A GERMAN physiologist has tried the effect of tea on the process of digestion by means of an artificial digestive fluid. His results bear out the accepted doctrine that tea, like coffee, retards digestion. The tannin or tanning principle of the tea is chiefly instrumental in hampering the digestion, and hence people with weak digestions should not drink brown, or "strong" tea; that is, tea which has been allowed to infuse for any time, and thus "draw" out the tannin of the leaves. Moreover, as China tea, as a rule, contains less tannin than the Indian sorts, it is preferable for brainworkers and persons of sedentary habits.

TESTS UPON TUBERCULOUS COWS.

EXPERIMENTS upon tuberculous cows which have been conducted at the Ohio Experiment Station throw some doubt on the correctness of the theory that tuberculosis is communicated by the use of the milk of consumptive cows. Two years ago eleven cows were condemned by the tuberculin test. They were segregated, but in no other respect was any change made in their care. Their milk was fed to calves, one of which, after having been thus nourished for seven months, showed no reaction with tuberculin, and no tubercles were found post-mortem. The eleven cows were slaughtered recently, and the government inspector condemned the carcasses of only two of them as being unfit for food.

APPETITSILD IN BLOWN TINS.

MR. JOHN BRADLAND Stavanger, Norway, writes: "Appetitsild is not what is generally understood by 'canned goods,' inasmuch as it is not cooked or sterilised, but is simply cured by salt and spices, much in the same manner as herring or mackerel. Appetitsild, which is simply skin and boneless anchovies, may as well be packed in wooden packages as barrels or kegs, and will keep from season to season in the wood. The goods are packed in tins merely because it would be inconvenient to place a barrel or keg on the breakfast or lunch table, and not because the goods need to be packed in an air-tight package.

"The 'blowing' of the tins, so far from being a sign of the spoiling of the contents, is by experts in the trade and connoisseurs in general considered to be a sure sign of thorough maturity or 'ripeness'."

"Anchovies and appetitsild may of course spoil, as may herring or mackerel, or any other food product; but 'blown' tins do not indicate that such is the case."

THE IRISH DAIRY ASSOCIATION AND THE NEW FOOD AND DRUGS ACTS.

AT the annual meeting of this association the following resolutions were adopted.

"That this association considers the 'Foods and Drugs Bill' at present before Parliament to be faulty in the following respects:—First, that the restriction of the amount of butter fat permissible in margarine to 10 per cent. is likely to cause great injury to the butter trade and annoyance to the retailers; that the percentage should be restricted to 5, or left entirely open. Secondly, that a clause should be inserted to prevent margarine being coloured to resemble butter. Thirdly, that the certificate of any analyst whose qualifications are approved by the Local Government Board should be accepted as evidence. Fourthly, that the registration of margarine factories should be taken out of the local authorities, and made compulsory under heavy penalties."

COLEMAN & CO., LIMITED.

WE are informed that Mr. J. G. Snelling, of Rampant Horse Street, Norwich, with other influential citizens of good commercial repute and standing have joined the Board of Coleman and Co., Limited, "Wincarnis" Works, Norwich.

REVIEW.

HOLIDAYS IN THE OLD FLEMISH CITIES AND THE ARDENNES, BY PERCY LINDLEY.—This booklet, written in the interests of the Great Eastern Railway Company, contains many delightful views of Oudenarde, Antwerp, Malines, Brussels, Ghent, Bruges, Ypres, and in a charming gossipy style Mr. Lindley imparts a great amount of information which tourists and travellers will find very useful. We have personally tested for some years the advantages the Great Eastern Railway Company offer via Harwich to the Continent, and as regards comfort, convenience, and civility it would be hard indeed to improve upon the service.

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by clamouring that the word should be "separated" have not only covered themselves with ridicule, but spoilt the measure. Anyone who knows the lives of the poor who mainly use this cheap skimmed milk is well aware that they understand the word "skimmed," but "separated" conveys no meaning to them. Indeed it is likely that the average user would regard milk so labelled as a superior article. Hence there is much to be said for Mr. Heywood Johnstone's Amendment that such milk tins should bear the statement "not suitable for feeding infants." Mr. Long agreed to consider some form of words to meet this demand. Some of the suggestions made were absurdity itself, thus Mr. Bartley suggested "Bad for babies" whilst Sergeant Hemphill thought "Infanticide" suitable. We are entirely in favour of suppressing the sale of condensed skimmed milk for infants feeding, but we must protect against some of the unwarranted statements made in the debate. For example, Mr. Strachey said "this stuff was merely chalk and water." This is untrue and grossly unfair to a valuable article of Commerce. Condensed skimmed milk contains a high proportion of nutriment, and if other fat were added to it to replace the butter fat abstracted, it would be little if any less valuable than the best condensed whole milk. Its cheapness makes it a real boon for hundreds of thousands of workers in the mills throughout the United Kingdom. It keeps longer than new milk, it is more portable, and it is free from the risk of spreading disease. Mr. Strachey and his friends who denounce it in the way we comment on are either very ill informed or the victims of prejudice.

ADULTERATED CAMPHORATED OIL.

At Kingston County Bench, Thomas E. Butler, carrying on the business of a grocer and provision merchant at the Post Office, Hook-road, Surbiton, was summoned for unlawfully selling a certain drug, to wit, camphorated oil, which was deficient in camphor 40 per cent., and was not of the nature, substance, and quality demanded. There was a second summons against Messrs. Bell, Sons and Co., Limited, of 33 and 37, Lydia Ann-street, Liverpool, from whom Mr. Butler obtained the oil, for having falsely described the same as "genuine camphorated oil." Mr. R. A. Houghton, county inspector, gave evidence. Mrs. Butler said that the oil was sold in small bottles in exactly the same way as it was supplied by the wholesale firm. Mr. Cockburn said that the Bench considered it a petty fraud by which poor people suffered. They did not think any blame whatever was attached to Mr. Butler, and the summons against him would be dismissed, but in the other case the penalty would be £5, with 14s. 6d. costs.

A LARGE AMERICAN COMPANY FINED FOR BAD AMERICAN PORK.

At Birmingham on July 19th, an American Beef Company were summoned for exposing for sale, on the 16th May, seven loins of pork which were unfit for human food. There was a second charge of depositing a quantity of bad pork for the purposes of sale. Mr. E. V. Hiley appeared to prosecute, and Mr. H. A. McCardie (instructed by Messrs. Buller and Cross) defended. Mr. Hiley stated that the defendants were one of the large American beef companies, having places of business all over the country, and they occupied two stalls in the City Meat Market, in Bradford-street. On the 16th of May,

Food and Sanitation.

SATURDAY, JULY 29, 1899.

SPECIAL NOTICE.

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All communications for the Editor of "Food and Sanitation" must be addressed to

4, AVE MARIA-LANE,
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CONDENSED "SKIMMED" OR "SEPARATED" MILK.

At last the alteration in the law which we demanded seven years ago is on the point of being made, but we very much fear if those indiscreet advocates who insisted on bettering our original demand that the word "skimmed" should be as large and plain as the words condensed milk,

the Corporation inspector visited one of the stalls, and found on the stand four loins of pork which were bad and unfit for food. The meat was spotted, sour, and stinking. In a box at the back of the stall there were three loins of pork in a similar condition. The meat was seized and condemned by a magistrate. Subsequently the inspector requested the manager to open some boxes of pork which were at the back of the stall deposited for sale. These boxes contained forty-six loins of pork, which were also unfit for food, and there were fourteen other loins, of which the one end was bad and the other end good. These also were condemned by a magistrate and destroyed. The weight of the meat exposed for sale was 98lb., and the weight of that deposited was 703lb. Inspector Hothersall bore out Mr. Hiley's statement. Cross-examined by Mr. McCardie, the witness admitted that on the boxes was a small label bearing the certificate of the American authorities. Dr. Hill, who examined the pork, described it as being in a state of considerable decomposition. The meat was bad, wet, and very much softened and offensive in odour. For the defence, Mr. McCardie submitted that in regard to the forty-six loins no offence had been committed, as they had not been unpacked. The defendants were always careful to obtain certificates from America, so that no diseased meat, or meat in an unsatisfactory condition, is shipped to them, and every piece of meat received by them is marked by the proper authority, indicating that it is in good condition. A previous conviction was recorded against the defendant, and the magistrates, after a short retirement, stated that they had decided to convict with regard to the four pieces of pork which were exposed for sale on the stall. It was a very bad case, and the defendant's, they said, would be fined £20 and costs for each piece, making £80 and costs in all. Mr. McCardie intimated that defendants might appeal against the decision, and the magistrates stated that they had not dismissed the other cases; they had not considered them.

UNSOOUND FRUIT.

At North London Police Court on July 20, the sanitary inspector of the Hackney Vestry asked Mr. Dickenson to make an order for the destruction of 55 baskets of black currants which he had just seized inside the jam factory of Messrs. Gayton, of Hackney Wick. The fruit was brought to the court in a van. Mr. Dickinson said he had smelt so many nasty things of late that he rather hesitated. Mr. Gayton said he had not opened these baskets until the sanitary inspector called, and he would not have used the bad fruit in his business. He did not object to the condemnation. The fruit was condemned.

A MAGISTRATE REFUSES AN ORDER TO CONDEMN UNSOUND TINNED FOOD.

At Thames Police Court on July 18th, Mr. H. G. Young, solicitor, acting on behalf of the Poplar Board of Works, applied to Mr. Mead for an order to condemn a large number of tins of lobster, pâté de foie gras, and milk. In consequence of a communication from the Greenwich sanitary inspector, Dr. Alexander, medical officer, and the Poplar sanitary inspectors, Messrs. Anthony and Bullock, went to 12, Stainsby Road, Poplar, in the occupation of Messrs. Vernon and Co. They saw a young man who denied that any tinned food was on the premises, and showed them over the upper portion of the house, but on the inspectors going into the basement they found 81 tins of the above-mentioned foods, all of which, in the opinion of the medical officer, were unsound and unfit for the food of man. It was also the opinion of that gentleman that the tins were deposited there for the purposes of sale. The young man refused his name, but it was afterwards found to be one well-known at that court in connection with bad tinned food. Mr. Mead said he had an aversion to making ex-parte orders, as there was no urgency. Mr. Young submitted there was, and the young man, Vernon

Fells, was present at that court.—Mr. Mead repeated that he saw no necessity for making the order. It was not compellible, and he could use his discretion. He had made up his mind not to grant such orders unless there was much urgency. He should decline the application.—At Thames Police Court, on July 20th, Mr. George Hay Young, solicitor, stated he had to make another application to Mr. Mead for an order to destroy a large quantity of bad tinned food, which had been seized by Dr. Alexander, medical officer, and Mr. E. Miners, sanitary inspector to the Poplar District Board of Works. Acting on certain information, Dr. Alexander and the sanitary inspector went to some stables at Wilson Street, rented by Vernon Fells, and there found stores of bad tinned food, which they seized and had brought to the Court in a van. As the goods were quite bad, he asked for an order of condemnation. Mr. Mead said he failed to see any urgency. Mr. Young rejoined it was a serious matter, and if they had to keep all these sort of things, sufficient room could not be found. Vernon Fells was called into Court and claimed the tinned food as his property. He objected to all the tins being destroyed as some were good. Mr. Mead said in that event he did not think it right to make an order. Mr. Young could have a summons against Fells, but they had better first agree as to the good and bad tins. Later in the day Mr. Mead granted a summons against Vernon Fells.

WATER AT SPIRIT PRICE.

At East Penwith Petty Sessions on July 18th, Thomas Tressider, landlord of the Royal Standard, Redruth, pleaded guilty to selling whiskey 28·61 degrees under proof. On being sworn he said he believed he was acting justly, but had not had a tester for his liquor. Mr. W. Cole Pendarves (the chairman): It is a very curious thing that when you do these things you never put in less water than you are allowed. (Laughter). Tressider: I am a new hand in the business, and I hope you will make a little allowance. For the future I will have a tester to test my liquors. The Chairman: You must be careful if you make a mistake to make it the other way. (Laughter). If you sell a considerable quantity of whiskey and adulterate even to this extent, you make a large amount of money which you ought not to make.—Fined 10s. and 28s. costs.

At Pontypridd, on July 20th, the landlady of the Bridge Inn, Pontypridd, Mrs. Elizabeth Thomas, was summoned for selling adulterated spirits. Mr. Colenzo Jones defended. Superintendent Cole gave evidence to purchasing spirits at the house on the date mentioned, and sending a quantity to the public analyst. The certificate showed that the whiskey was 37½ degrees under proof instead of 25; the rum 38 instead of 25; and the gin 37½ instead of 35. There was no card hanging in the room to that effect. Mrs. Thomas said she was not present at the time. The house was being painted, and the painters had taken the notices down. The Bench fined defendant 1s. and cost in two of the cases, and the gin case was dismissed.

GEORGE HAMM, landlord of the Bunch of Grapes, Pontypridd, was also charged with selling rum 32½ degrees under proof. The case was proved again by Superintendent Coles, and defendant was ordered to pay the costs.

A SIMILAR charge was heard against Mrs. Thomas, Sportsman Hotel, which was, on the application of Mr. J. Phillips, adjourned.

At Thames, on July 20th, Walter Williams, of the Anchor and Hope, Jamaica-street, Stepney, was summoned for selling gin 7·8 degrees below the minimum strength. Mr. George Hay Young prosecuted, and Mr. Maitland (Maitlands, Peckham, and Co.) defended. On the 22nd June the inspector's man purchased a pint of gin, for which he paid 1s. 8d. On Mr. Twaites, the inspector, entering the saloon-bar his attention was drawn to a notice stating that all spirits sold were diluted, but it could not

easily be seen from that portion of the house. Mr. Twaites said he saw no label until the defendant drew his attention to it. The screen was behind the counter, and at right angles to the latter. In order to see it at all from the saloon-bar one must be at the extreme right hand of the counter. He told the defendant it would be more satisfactory to put a label on each bottle. The inspector, in reply to Mr. Maitland, denied that it was another attempt to put labels on the bottles. He could see the back of another notice. The screen prevented him properly seeing the notice. He had been to the house on a previous occasion when he had seen a notice. In answer to the charge, Mr. Maitland submitted that the last answer concluded the whole matter. It was perfectly obvious that the inspector went with the object of not seeing the notice. That was the difficulty in which the trade was placed, owing to the inspectors acting in that perfunctory manner. The screen did not prevent the eye catching sight of the notice. The defendant, in reply to Mr. Mead, said he had been in the house for eight months. Mr. Mead: And when you went in you put up a notice, "This house is entirely under new management?" The defendant: Yes. Mr. Mead: That implied that the old order of things was entirely done away with. That is always done by publicans, but why I don't know. The defendant ought to take more precautions to let his customers know the custom of the trade. He would be fined 40s.

At Auckland, on July 24th, Robert Crawford, landlord of the Two Bay Horses Inn, Hunwick, who was represented by Mr. J. T. Proud, pleaded guilty to selling to Mr. M. A. Thompson, food and drugs inspector, a quantity of whisky which upon analysis was found to be 31.96 degrees under proof. On behalf of the defendant Mr. Proud stated that the house was undergoing extensive alterations, and in the consequent disorder the defendant by mistake mixed a quantity of brandy and whisky together and then added water in the measure required for whisky. The measure was five gills of water to a gallon of whisky, and four gills of water to a gallon of brandy. Defendant added two and a half gills of water to the mixture of brandy and whisky which he thought to be all whisky, and this was responsible for the adulteration. The defendant, who gave evidence on his own behalf, stated he served his customers with the mixed spirit on the previous evening. Mr. Proud: And did they like it? Defendant: Oh, yes: they said they had never tasted better whisky in their lives. (Laughter.) The landlord added that the mixing of the two lost him 4s. on the quart. The Bench considered a fine of 10s. sufficient to meet the case.

At Llandaff, on July 24th, Mrs. Thomas, of the Cow and Snuffers, Llandaff Yard, was summoned, at the instance of Inspector Williams, of Barry Dock, for selling whisky adulterated to the extent of 42deg. under proof. She admitted the offence, and said that it was committed while she was away on her holidays. The Bench said that, in consideration of the excellent manner in which the house had been conducted, they would inflict a penalty of £3, with £1 3s. 6d. costs only.

BLUEBOTTLES AND UNSOUND MEAT.

An Interesting Case.

At West London Police Court, on July 20th, there was an adjourned summons against Messrs. Beasant and Fry, of Fulham-road, for selling to Mary Hockey, a cooked ham bone, with about 2lb. of meat upon it, alleged to have been unfit for the food of man. Mr. Blanco White supported the summons on behalf of the vestry, and Mr. John Haynes appeared for the defendants. It was sold on Saturday night, the 24th of June, and taken to the sanitary inspector on Monday. A question arose as to whether there had been a seizure of the ham bone which was condemned. Mr. White said he proceeded under section 47 of the Public Health Act, 1891, sub-section 2. His contention was that the meat bone was seized when it was brought to the officer, and that he seized an article

which had been sold. Mr. Haynes agreed that the proceedings should have been taken under the third section. He also contended that the meat was not diseased when sold. Dr. W. J. Townsend Barker, of Wandsworth Bridge-road, who held a diploma in sanitary science, gave technical evidence to show that the maggots on the meat on the bone must have been caused by the deposit of eggs while it was in the kitchen from different insects, of which there were many kinds, the most important being the bluebottle, each female being capable of producing 20,000 hatching under two hours. Mr. White said he should like to have an opportunity of calling expert witnesses. Mr. Lane, Q.C., thought there should be an opportunity, as it was an interesting case. The summons was further adjourned.

MARGARINE CHEESE.

THE sum of 40s. was the penalty imposed by Mr. Mead at the Thames Court, on July 20th, upon Jacob Harris, 129, Commercial-road, who was summoned for selling cheese adulterated with 24.7 per cent. of margarine.

THE DEBATE ON THE SALE OF FOOD AND DRUGS BILL.

(Continued from page 357).

THE Solicitor-General, giving the hon. baronet all credit for a desire to improve the Bill, remarked that if his amendments were accepted the Bill would be improved out of existence. The first part of this new clause was unnecessary, because the Act which the hon. baronet proposed to amend applied to every person who sold to the prejudice of a purchaser any article mixed in the way described in the Act. The hon. baronet proposed to extend the Bill to the wholesale dealer, but how was it possible for an officer to proceed into a manufactory under the procedure of Section 17 and purchase a sample? That was not the ordinary course of business; it was not the way the wholesale dealer traded, and the proposal would be unworkable.

Mr. Lough would not admit that the proposal was impracticable. The taking of samples from a wholesale dealer was not unusual, and the officer could pay the retail cost of the sample. There need be no difficulty in carrying out the spirit of the amendment.

Mr. Radcliffe Cooke (Hereford) thought it was certainly undesirable that the wholesale dealer should escape with impunity.

Sir J. Leng was perfectly satisfied that in principle the proposal was sound, and he urged in forcible terms that rascality should be stopped at the fountain-head, and the big rogues should not be allowed exemption from penalties the small shopkeeper sometimes innocently incurred.

Mr. Long explained how the retail dealers had his remedy against the wholesale dealer under the Act of 1875, and the retailer purchaser had the protection of his warranty.

Sir W. Foster said the retail dealer had difficulty in availing himself of the Act of 1875. The clause would certainly meet those cases of hardship of which, when he was at the Local Government Board, there were constant complaints. He thought it would be an improvement to the Bill, and would do away with hardships, if some such words as those of the hon. baronet were inserted.

Mr. Pickersgill thought the reply from the Treasury bench was scarcely adequate. The principle contended for was already admitted in that section of the Bill which gave power to officers of the Board of Agriculture to take samples of margarine from any manufacturer for analysis.

Mr. Evans said his hon. friend's desire was, he understood to hit the wholesale dealer where the retail dealer

was practically innocent. He asked whether the Government intended to adhere to Clause 19 (provisions as to use of warranty or invoice as defence) as it stood at present, because, if they did, when the defence of the retail trader was complete surely the wholesale dealer might be proceeded against. At any rate, a provision might be inserted in that clause to the effect that where a retail dealer got off under its provisions a prosecution should be instituted against the wholesale dealer.

Mr. Channing (Northampton, E.) thought the Bill would be very unsatisfactory if it did not cover the case of organised fraud on the part of wholesale dealers.

Mr. Duckworth (Lancashire, Middleton) said the amendment was an important one, and it would be to the interest of the small shopkeepers if the wholesale men went in fear of being pounced upon.

Mr. A. Cross (Glasgow, Camlachie) contended that where the defence of a retail trader was the production of an invoice from a wholesale man the latter should be proceeded against.

The House then divided -

For the clause ...	...	...	75
Against ...	...	...	175
Majority against ...	...	...	100

The clause was therefore rejected.

Sir C. Cameron moved the second reading of a new clause providing that a standing committee of reference on food standards shall be set up by the Local Government Board. He urged that this committee would give the law a certain amount of flexibility.

Mr. Long hoped the House would not adopt the clause. It was true that a Select Committee recommended that a committee of reference should be appointed to arrive at a standard of purity. That recommendation was one that the Government had found it impossible to give effect to, for it would transfer the responsibility which rested upon a Government Department to an irresponsible committee of experts. It was suggested that the appointment of this committee should be in the hands of the Local Government Board, and, speaking for his own Department, he would be content that it should be so, for he was perfectly confident that the interests of his own Department would be looked after; but at the same time this committee would have to come to decisions on many articles of agricultural produce and he thought it would lead to confusion if the Local Government Board were called upon to appoint it. Taking the case of butter, it would be quite easy for a committee of this sort to proceed to work with the fullest intention to do their duty and yet arrive at a conclusion which might ruin a third or half of the dairy agriculturists in the country. That was a reason against giving such large powers to an independent expert authority free from the control of any Government department. He considered that the clause the Government had put in the Bill giving power to the Board of Agriculture to make regulations as to analysis of milk, cream, butter, or cheese would quite sufficiently carry out the recommendations of the committee or the requirements of the public. It was a compromise on a complicated and difficult question, and would give effect to the wishes of those interested in agriculture as well as of those who were anxious that there should be some well-understood line dividing what was pure from what was impure. He therefore hoped the House would not adopt the hon. baronet's clause.

Mr. Kearley said they were all agreed that a committee or board to deal with the question of standards of purity was absolutely required, and if the right hon. gentleman was prepared to give the House an assurance that the committee would not be constrained or confined in its action, he did not think it would matter by whom it was appointed. (Hear, hear.)

Mr Lowles (Shoreditch, Haggerston), contended that

the analysts at Somerset House enjoyed the confidence of the whole trade of the country, and no committee which could be formed would do such satisfactory work.

Mr. Hedderwick (Wick Burghs) said that if these serious penalties were to be imposed, it was desirable that there should be a standard of purity by which traders might know whether they were or were not complying with the law.

After a few remarks from Mr. Radcliffe Cooke,

Dr. Clark said the choice lay between the Local Government Board and the Board of Agriculture. He was in favour of the Local Government Board, and he also advocated the setting up of complete standards. The House ought to fix a standard because, by the decisions of the courts, analysts had to lay down and determine the standard on which their evidence was submitted. He hoped the House would support his hon. friend's clause. They would then have a standard set up by men capable of doing it, and not by some one appointed by the Minister.

Mr. T. W. Russell (Tyrone, S.) contended that matters like milk and butter, which gave the most trouble, were more germane to the Board of Agriculture than the Local Government Board, which already had quite enough work to do.

Captain Sinclair (Forfar) supported the clause in the general interest of the consumer. The importance of milk and butter as articles of food was greater to the consumer than to the agriculturist, and the sanction for legislation of that kind was that they were bound to take precautions to prevent anything being done which was injurious to the health of the former. By entrusting the administration of that Bill to a department going by the name of the Board of Agriculture, they would incur a very serious risk that the interests of agriculture would receive more prominence than the interests of the consumer.

Mr Bryce said there was a strong *prima facie* case in favour of the proposal of his hon. friend. It proceeded on the lines of the report of the Committee, which examined the subject with great care, and it proposed to entrust the administration of powers which must be worked out by local authorities to a body—the Local Government Board—which already supervised those bodies in respect of public health and many other matters. The only answer to that strong *prima facie* case was that the Board of Agriculture was concerned with dairying; dairying produced butter; therefore the Board of Agriculture was a fit and proper body to administer the Act. That rested upon the patent fallacy that the man who made milk and butter was the man who knew best what milk and butter ought to be. He did not; it was a very difficult matter of science which required the utmost skill and experience on the part of practical analysts and of those who had devoted the whole of their lives to the study of chemistry. It seemed to him that the Board of Agriculture was a very ambitious department. (Cheers.) It wanted more work, but it had a great deal to do still in its own proper sphere in endeavouring to induce British farmers to adopt the methods in use in other countries. (Cheers.)

Mr. Whiteley said the right hon. gentleman had an amendment down on Clause 4 which materially extended it, and in a manner not contemplated by the Committee upstairs.

Mr. Long explained that since the amendment was placed on the paper it had been found that it went much further than he intended, and he therefore proposed to remove it.

Mr. Whiteley, continuing, said no one objected to Clause 4 as it stood in the Bill. They were quite willing to entrust it to the Board of Agriculture—(cries of "No, no" from the Opposition benches),—but they could not give the Board the power to appoint committees with a roving commission to deal with all food products.

Mr. Evans said this question had descended into a contest between the Local Government Board and the

Board of Agriculture. Personally, he saw no difficulty in allowing the matter to remain where it was. What they had got to do was to see that they had facilities for prosecuting those who sold adulterated food. What was adulterated food was perfectly easy to ascertain at the present moment. (Cries of "Oh.") On the whole, he thought the Local Government Board were better able to deal with the matter than the Board of Agriculture, though he confessed that personally he should prefer to have his milk, cream, butter, and cheese chosen by the President of the Board of Agriculture rather than by the Parliamentary Secretary to the Local Government Board. (Laughter.)

Sergeant Hemphill (Tyrone, N.) said that if the question went to a division he should vote with the hon. baronet the member for the Bridgeton Division of Glasgow. In his opinion it was quite immaterial whether the nomination of a standing committee should be by the Local Government Board or by the Board of Agriculture. The value of the new clause was that it proposed such a committee of experts. But, as the Local Government Board was at present charged with the administration of the law, there was no reason why it should be taken out of its hands and transferred to the Board of Agriculture.

Mr. Kilbride also said he would support the clause.

The House divided, and there voted—

For the Clause ...	...	...	84
Against ...	...	...	194
Majority ...	...	...	110

Mr. Kearley moved to insert the following clause:—
 "Any inspector appointed by any local authority, or by the Local Government Board, under this Act, shall have power—(a) at all reasonable times to enter any public or private sale-room occupied or used by merchants, brokers, wholesale dealers, or other persons, and to any public or private warehouse, factory, store, quay, ship, or barge, where food or drugs are offered for sale or deposited for the purpose of sale or carriage, and to purchase, seize, or procure samples of any such food or drugs; (b) to purchase, seize, or procure samples of any food or drugs at the time of delivery, or at any railway station or other place during transit, or upon the premises of or elsewhere in the possession of any person for the purpose of carriage." The hon. member said that the powers he sought by this clause already applied to milk and margarine, and it was desirable when they were legislating on food adulteration that inspectors should have power to take samples of goods during transit. It would apply to goods distributed about the country in carts. The Manchester and Salford authorities who had done more than any others to stamp out milk adulteration, had found the power he proposed invaluable.

The Solicitor-General hoped the hon. member would not press the clause to a division. The House had rejected the proposal of the hon. member for Bridgeton that inspectors should have power to enter premises where goods were sold by wholesale and purchase samples for analysis, and the present proposal went even further, for it proposed to issue letters of marque to the inspector "to purchase, seize, or secure." The whole clause was high-handed and too arbitrary in its terms, however much they might sympathise with the object of the hon. member.

Mr. Burns alluded to the recent wholesale seizure of rotten fruit by the vestry of Bermondsey and said it was done from the point of view of preventing a nuisance. What the sanitary authority did to prevent a nuisance an inspector of the Local Government Board or the Board of Agriculture ought to do in the interests of pure food and the prevention of adulteration. Some three or four months ago a sanitary inspector of the same vestry, to prevent a nuisance, seized many hundredweights of putrid livers and kidneys that were going to be manufactured into *pâté de foie gras*. (Laughter.) He was much interested in preventing the upper classes from being

contaminated by an impure food supply—(renewed laughter)—and therefore held that an inspector under this Act should have the power to go into a factory at Bermondsey and prevent the consumer being defrauded by the sale of impure food. Without the widest and most drastic power of this sort they would never stop adulteration. He advocated stiff penalties, and, in very serious cases, imprisonment. He quoted statistics from the quarterly report of the vestry of Battersea to show the serious extent to which butter was adulterated with margarine, and thought the inspectors should have power to visit the place of manufacture at all hours of the day or night.

Mr. Hobhouse (Somerset, E) said the hon. member for Battersea was quite right in thinking there was good reason for inspecting the margarine factories, but he would point out that there was already a provision enabling any officer of the Board of Agriculture to enter a margarine factory at all reasonable times, inspect the process of manufacture, and take samples. Surely that was a much better provision than one that would give power to a local inspector—(hear, hear)—and the ordinary trader would much prefer the visits of an inspector of a Government Department.

Mr. Hedderwick thought the hon. member took an exaggerated view of the provision to which he had alluded, because the inspector of the Board of Agriculture only made a visit when it was rendered necessary by the default of the local authorities. (Ministerial cries of "No.") Even assuming he was wrong in that respect, what they wanted was not only inspection of margarine factories or small shops, but inspection everywhere where goods were sold, whether by retail or wholesale. If the Government really had at heart the desire to protect the consumer and producer, too, if they liked against adulteration, he could not understand why they should refuse to give to an inspector power to inspect anywhere. The words of the clause were statutory words.

Mr. Duckworth (Lancashire, Middleton) supported the amendment.

Mr. Platt-Higgins (Salford, N.) also supported the amendment, but for a different reason to those already advanced. There was an association in his borough which complained that, while local inspectors had power to take samples of milk, they had no power to go to the railway station where the milk was delivered by the farmer and take samples in order to test its condition before it came into the milk-seller's possession. He thought it was only just that the milk of the farmer should be tested just as much as the milk of the retailer, and on that account he should support the amendment.

Mr. Brynmor Jones (Swansea district) could not support the amendment because it seemed to him to be one of extreme generality and one which might be used in the most oppressive way in regard to the trade of the country. It proposed to confer upon persons appointed by local authorities powers which had, he believed, never been conferred upon any person appointed by any local authority.

Mr. Johnstone (Sussex, Horsham) reminded the committee that at the present time it was possible to take samples in course of delivery. He felt unable to support the amendment in the form in which it had been placed on the paper.

Mr. Evans said that the question before the House was only the second reading of the clause, which could afterwards be amended. It would always be impossible to stop adulteration as long as prosecutions were confined to the retail dealers. The wholesale dealer might actually profit by the fraud, and it might be worth his while to pay the retailer's fine.

Dr. Clark said that if the Government wished to stop the system of adulteration, it was necessary to take measures to deal with the large dealers as well as against the small traders.

Sir J. Leng, while in favour of dealing with all sources of supply, believed that it was somewhat dangerous to interfere with some places of transit mentioned in the clause. Great antagonism to the operation of the Bill would thereby be raised.

Mr. Labouchere (Northampton) could not understand this antipathy against margarine, which, in his opinion, was one of the most excellent articles of food—(laughter)—and he held that it was altogether illogical and absurd to say inspectors might inspect manufactories of margarine but should not inspect cocoa manufactories or baking-powder manufactories or anything else.

Mr. Jeffreys (Hants, Basingstoke) thought the clause went too far and would raise up great hostility to the Bill, and he was certain that they could not get the local authorities to utilise such powers.

Mr. Kilbride pointed out that at present samples of milk could be taken in course of delivery, and he saw no reason why the same rule should not be applied to other articles of food.

Mr. J. Samuel (Stockton) thought the proposed clause too wide and general. The power of acting under the warranty would obviate the necessity of the inspector going into warehouses or factories, and if the powers conferred by the Bill were properly exercised, all parties would find it unprofitable to deal in adulterated food.

The House divided, and the numbers were—

For the clause	...	...	...	50
Against	...	...	...	177

Majority against 127

On the motion of Mr. Balfour, the debate was then adjourned.

A SECOND NIGHT'S SITTING.

On Tuesday evening the House of Commons resumed the consideration of the Sale of Food and Drugs Bill as amended by the Standing Committee.

Mr. Lambert (Devon, South Molton) moved the following new clause:—"It shall be unlawful to manufacture, sell, expose for sale, or import any margarine which is coloured so as to imitate or resemble butter, and every person who manufactures, sells, exposes for sale, or imports any margarine so coloured shall be guilty of an offence under the Margarine Act, 1887." The Select Committee on the Adulteration of Fruit Products, he reminded the House, recommended that margarine should not be coloured so as to resemble or imitate butter, and his amendment simply embodied that recommendation. There was no desire on the part of agriculturists to unnecessarily restrict the sale of margarine. What they did wish to do was to put down the fraud which was made possible by this artificial colouring of margarine. They had no wish that margarine should be distinguished by some objectionable colour such as pink, blue or green. All they asked was that it should not be coloured so as to resemble or imitate butter. It had been said that this Bill was founded on protection; but that was not so, unless free trade meant free fraud. Why, out of all the colours available, should margarine manufacturers choose the colour of butter for their product? Why should margarine be made exactly to imitate butter if it were not destined to be sold as butter? Holland was the home of the margarine trade, for out of 899,000 cwt. of margarine imported into this country, 843,000 cwt. came from Holland. In connection with these figures it was significant to notice that the country from which the exports of butter had most largely increased was also Holland. He was convinced that a large amount of what purported to be butter, and came from Holland, was really margarine. He had the prospectus of a margarine company recently started in Holland, on the board of which it was desired that English members of Parliament should serve. As to the colouring of butter, that had been much exaggerated.

The secretary of the dairy section of the Bath and West of England Show had assured him that no prizes were given for butter artificially coloured. In any case, butter was never coloured to imitate margarine. (Laughter.)

Mr. Long said that he had heard no new views enunciated in the speech of the hon. member, nor had he heard anything which might lead him to change the opinion he had formed, that the proposed change in the law embodied in this clause was unjust and impolitic. The hon. member said that butter was coloured only to a small extent. He disagreed with that view, for every one knew that the butter industry was largely local in its character, and that the colouring of butter was a general practice. Neither was butter the only dairy product which was coloured. What did the hon. member say with reference to cheese? Certain kinds of cheese were made according to the fancy of the customer, and the cheese was coloured in the factory, not to imitate another cheese, but because colouring was attractive to the purchaser. The majority of samples of margarine he had seen had been coloured a kind of yellow. Was it suggested that the bulk of butter made in this country was yellow? On the contrary he believed that the greater amount of the ordinary butter consumed was white in colour. In a matter of this kind it seemed to him that some sections of the agricultural interest declined to profit by experience. He reminded his hon. friends of the abolition of the malt tax by Mr. Gladstone and the substitution of the "free mash tub," and believed that hon. gentlemen were running the same risk now in advocating prohibition of coloured margarine. They would not be able to limit the proposed prohibition to margarine, and in his judgment it was a great delusion to maintain that this margarine was a competitor of butter. There was no doubt that a great deal of margarine made in a particular way was sold as butter. The object of the Bill was to make this impossible in future; but if this ridiculous clause was to be incorporated in the Bill this kind of fraud would not be checked. The amendment would indeed be fatal to the Bill, and the Government could not accept it, because its effect would be to dislocate a very great trade which supplied a vast number of consumers in the country. He was told the working men of England desired that this prohibition should be made. (Hear, hear.) He doubted whether the working men had realised what were the alternatives presented to them, but, even if they had, he should prefer to take the opinion of the housewives first upon this question, and he was sure they would hold a very different opinion. They ought not to interfere with the margarine trade unless they were satisfied that by no other means could they put down fraud. He was satisfied they could put it down by this legislation, whereas the proposed clause would not be workable at all. He earnestly asked agricultural members not to take a step which would be prejudicial to their best interests and fail in the object they had at heart.

(To be continued next week.)

THE NUTRITIVE EFFECT OF ALCOHOL.

At a meeting of the Middletown (Conn.) Scientific Association, Professor W. O. Atwater, of Wesleyan University, reported the results of the experiments regarding the effects of alcohol lately carried out under his direction upon a man in the respiration calorimeter.

The special object of the experiments reported was to study the nutritive effect of alcohol. In these experiments pure alcohol was administered with water or coffee. In others, which will be reported later, it was given in the form of whisky or brandy. Still others are planned in which beer and wine will be used. The alcohol is taken with an ordinary diet of meat, bread, butter, sugar, and the like. The amount per day has been equal to about two and one-half ounces of absolute alcohol.

This is divided into six doses, three with meals and three between meals, the object being to avoid an especial

influence of the alcohol upon the nerves and thus test its action as food under normal bodily conditions. For each comparative test two experiments were made. One was with ordinary food, just sufficient to meet the wants of the body. In the other, part of the sugar, starch and fat of the food, the ingredients which supply the body with fuel for warmth and work, were taken out, enough to be chemically equivalent to the two and a half ounces of alcohol, as the latter was used in their place.

In the experiments, in which the man did no work, this alcohol made about one fifth of the total fuel material in the diet. In the experiments with hard muscular work, in which more food was used, the alcohol furnished about one-seventh of the fuel supply.

Three important results were observed:—First, extremely little alcohol was given off from the body unconsumed. Indeed, it was oxidized, burned as completely as bread, meat, or any other food. Secondly, in the oxidation, all of the potential energy of the alcohol was transformed into heat and external muscular power. In other words, the body made the same use of the energy of the alcohol as of that of sugar, starch and other ordinary food materials. Third, the alcohol protected the body material from consumption, just as effectively as the corresponding amounts of sugar and starch; that is to say, whether the body was at rest or at work, it held its own just as well with the one as with the other.

In explaining the experiments, Professor Atwater called attention to the fact that food has two chief uses. One is to build up the body and keep it in repair; the other is to supply it with energy for warmth and work. Certain ingredients of food, like lean meat, casein of milk, white of an egg and gluten of wheat serve the body for the building and repairing tissue. Others, like fat, sugar and starch cannot form tissue, their functions being to serve as fuel.

Alcohol is similar to the fats, starch and sugar in this respect. It cannot form tissue, but it does yield energy. It cannot be used to build the bodily machine or to repair it as it is worked out by constant use, but it can and does serve as fuel. This fact has been known in a general way for years, but there has been more or less question regarding the extent to which alcohol serves this purpose.

These experiments are more elaborate than any previously reported in America or in Europe. They were made so at the cost of a great deal of labour and money, because of the importance of the question studied. The result is exactly what was to be expected. Professor Atwater explained that the object of these experiments was simply to get a scientific fact. At the same time the results as facts are often misrepresented both by those who use alcoholic beverages and those who are earnestly desirous to promote temperance reform.

He therefore explained the bearing of these and other investigations upon some of the disputed questions regarding the nutritive value of alcohol. Whether alcohol is to be called food or not depends upon the definition of food. Such materials as meat, bread, milk and the like are complete foods; they both build tissue and yield energy. Alcohol only yields energy.

In this respect it is like starch, sugar and fat, which make the larger part of the food of man. But it differs from these in that it is more easily and immediately available to the body, because it does not require digestion. It is not stored in the body for future use, as is the case with the nutriment of ordinary food materials. If large amounts are taken the influence upon the brain and nerves is such as to counteract its nutritive effect so that it becomes injurious, and finally there are many persons who begin by moderate use, but are led to disastrous excess.

Alcohol may be useful to one man and harmful to another. One may take considerable without apparent harm, while another may be injured by very little. One may use it habitually without danger, while another may be unable to take even small quantities without going to

excess. In illness it may be a priceless boon, but it may likewise be the cause of physical, mental and moral ruin.

Whether alcohol is to be called a poison or not is again a matter of definition of terms. In large quantities it certainly is a poison, but the same is true of tea, coffee and many other common articles of diet. Hydrochloric acid is formed in the stomach and is indispensable for gastric digestion, and yet, if swallowed even in small quantities it would be a violent poison.

Alcohol used in quantities and ways which cause no injurious effects cannot properly be called a poison. While there are countless cases in which persons use moderate quantities of alcohol without harm, and often with benefit to health, the evil from its improper and excessive use is one of the most serious facts with which the physiologists, sociologists and moralists of to-day have to deal.

Reference was also made to the errors which are too often found in the teachings of so-called temperance physiology in the public school, the Sunday school and the pulpit, as well as on the temperance platform. Many who are earnestly interested in temperance reform feel it necessary to insist that alcohol is not a food, but a poison, that in any quantity, large or small, it is necessarily harmful and not useful.

These theories, it was shown, are based in part upon the results of experiments made years ago by imperfect methods, and since shown to be incorrect. They are directly opposed to the results of the latest and most reliable research, and to the opinions of the leading authorities the world over.

One essential for the success of true temperance reform is that what is taught as science shall be placed upon the basis of demonstrated fact. This means a change of base on the part of a great body of most earnest temperance reformers, but that change is necessary. To build up the public sentiment upon which the reform of the future must rest it is the wish that children shall understand about alcohol and its terrible effects. "But when we teach them in the name of science," says Professor Atwater, "shall we not teach them the simple facts which science attests, and which they can hereafter believe rather than exaggerated theories, whose errors, when they learn them, will tend to undo the good we strive to do?"

"In short, is not temperance advisable even in the teaching of temperance doctrine? In the great effort to make man better there is one thing that we must always seek, one thing that we need never fear, the truth."

THE SALE OF FOOD AND DRUGS ACT IN LEEDS.

MR. T. FAIRLEY, public analyst, reports that during the quarter ending June 30th, 1899, the samples received have been:—milk, 81; Butter, 4; Pickled Pork, 1; Milk of Sulphur, 13; Gregory's Powder, 1; Total 100.

Five of the milks were adulterated as compared with the lowest quality of genuine milks, and twenty-two were reported as of poor quality. Thus, thirty-three per cent. of the milk samples were unsatisfactory. The details of the adulterated samples are as follows:—

Milk No. 163	deprived of 7.5 per cent. of fat.
Milk No. 181	water added 10 per cent.
Milk No. 190	" 10 "
Milk No. 195	" 11.5 "
Milk No. 199	" 10 "

Milk No. 199 was compared also with another sample No. 202 taken on the same days from the same cows milked in the presence of the inspector.

They contained:—

	Milk 199 from dealer.	Milk 202 direct from cows.
Total Solids	10.64 per cent.	13.49 per cent.
Fat	2.99 "	4.65 "

To reduce Milk No. 202 to the level of Milk No. 199

thirteen and a half per cent. of water would have to be added, and thirty-three per cent. of the fat removed, whereas comparing Milk No. 199 with the limits applied by the chemists at the Government Laboratory, only ten per cent. of water would require to be added, and the removal of thirty-three per cent. of fat would not be discovered.

One of the Butters No. 112 contained at least seventy-seven per cent. of foreign fat. The vendor convicted last year of a similar offence, and then fined the maximum penalty, was again fined £20 and costs and in addition was fined £10 and costs under the margarine Act for exposing Margarine for sale without a distinctive label. It is evident that the large profits of a trade consisting in selling margarine as butter enable fraudulent dealers to make a good income in spite of the heavy fines imposed.

Eight samples of milk of sulphur contained much hydrated calcium sulphate. This admixture of gypsum or plaster of Paris with sulphur specially prepared for medicinal purposes is forbidden by the British Pharmacopœia, and is the result of an antiquated and imperfect mode of manufacture. The proportions of impurity in different samples as received were sixteen and a half, sixty-two, sixty-one and a half, seventy-six and a half, seventy-eight and a half, seventy-six and a half, thirty-four and a half, and seventy-six per cent. respectively.

The sample of pickled pork contained boric preservative.

The other samples received this quarter were genuine.

In comparing corresponding quarters of this and last year the number of samples does not enable me to draw any really valid conclusions as to the effect of the work done in promoting the objects of the Act.

THE ANALYSIS OF TABLE SYRUPS.

IN a letter to the *Grocer*, M.A., B.Sc., F.C.S., says:—The courage of the public analyst who kisses the book and swears that a certain sample contains 53 per cent. of glucose syrup and 47 per cent. of golden syrup is much to be admired. Any drug-compounder, however timid, would venture as much for an alloy of silver and copper; but glucose-syrup and golden syrup are not elements, nor have they a fixed composition, and it is impossible to determine how much of each is present in a mixture unless the analyst has samples from the actual barrels of syrup and glucose that were used in its composition.

Golden syrup contains large amounts of sucrose, dextrose, levulose, and water, and smaller quantities of other organic substances (e.g., caramel) and mineral matter. The exact amount of each is determined by a variety of circumstances. The material from which the syrup is made exercises an influence, and any alteration in the process of extracting raw sugar from the cane, beet, or date tends to alter the composition of the syrup which refiners produce. The variety of treatment in different refineries has an important effect; for levulose is much more easily destroyed than dextrose, and prolonged heating, especially in acid solutions, decomposes sucrose. The amount of sucrose that the refiner can profitably extract as dry sugar is also an influential factor; and, lastly, the syrup made in summer generally contains less water than that made in winter.

The case of glucose syrup is similar, for, although the raw starch from which it is made is more uniform than raw sugar, yet, by arresting the inversion at various stages, the American manufacturers produce glucose syrups that differ widely from one another. In addition to this more or less accidental variation there are two different kinds of glucose syrup known in commerce, called respectively 41 and 43, and both are used by syrup-mixers. No public analyst has yet stated to which he referred when giving his evidence against the persecuted grocer.

Enough has been said to show how much weight should be attached to the analyst's report. He takes, as

it were, a sample that a grocer has made by combining a bottle of Smith's mixed pickles with one made by Jones; and after laboriously counting the bits of cauliflower, onions, and gherkins, professes to discover how much of each brand was used, although he has never seen the original samples. Now it is well known that Smith's celebrated pickles contain no red pepper, whereas Jones's brand (an inferior article) does. The analyst's duty is clear. Let him avoid all reference to Jones, count the pods, and report that, when he asked for Smith's pickles, he received goods that had been adulterated with red pepper. For "Smith's pickles" read "golden syrup" in the parable, and for "Jones" read "glucose syrup"; then dextrine will stand for red pepper. Its presence is the real evidence of adulteration, and if the analyst would confine his energies to the estimation of dextrine his report would be scientific and conclusive.

The analysis of golden and glucose syrups is a matter of much time and difficulty, if it be conscientiously performed. Glucose syrup contains dextrose, levulose, maltose, dextrine, other organic substances, mineral matter, and water. Mystery surrounds the specific rotatory power of one or more of its constituents, and the author of "Commercial Organic Analysis" states that the majority of analyses "are vitiated by faulty methods" or "by insufficient knowledge of the constituents of starch sugar." In fact, so difficult is the analysis of golden syrup and glucose separately, that a thorough analysis of a mixture of them both borders on impossibility. That a mere determination of the polarisation is not enough is shown by the fact that nothing is easier than to make a mixture of beet sugar (partly inverted), glucose syrup, colouring matter, and water that shall have the appearance and polarisation of old-fashioned golden syrup made from cane raw sugar. (A patent for making a honey substitute by similar means was actually granted to Mr. Lyle and his chemist, Mr. Eastick, in 1885.) We recommend analysts to give more attention to the presence or absence of dextrine, and to avoid the imaginative terms in which they have hitherto drawn up their reports on table syrups."

Correspondence.

SEIZURES OF FRUIT.

TO THE EDITOR OF *Food and Sanitation*.

SIR,—I have read with much interest the accounts appearing in the daily Press of recent wholesale seizures of fruit. In many cases the only reason given, at all events in the reports available, was that they were showing signs of fermentation. I suggest, Sir, although I have not actually seen the parcels of fruit in question, that the reason given is not an adequate one for condemning the fruit. Incipient fermentation does not *per se* render fruit of this nature unfit for human food, and when the fruit is practically taken straight from the tub to the boiling vat, the question of incipient fermentation becomes trivial. Bad—really bad—fruit is another matter, and inspectors cannot be too vigilant in this respect. But from actual experience of fruit submitted to me in previous seasons, I think there is a danger of a some excess of zeal being displayed in this matter, and that if carried to its logical conclusion it will be a matter of impossibility to import certain fruit from the Continent at all in hot weather.

I should at the same time like to know whether the average inspector and medical officer of health consider many of the green gooseberries, apples, and pears exposed for sale in an absolutely sour and unripe condition, and which are available for purchase by very young children, "fit for human consumption." Might not attention be legitimately directed to these as not only unfit for food, but actually harmful?

I am, Sir, yours, &c.,

ERNEST J. PARRY, B.Sc., F.I.C.

134, Upper Thames-street, London, E.C.,
July 19, 1899.

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Food and Sanitation.

SATURDAY, AUGUST 5, 1899.

SOME POINTS ABOUT SEIZURES OF ALLEGED UNSOUND FRUIT.

THE letter from Mr. Parry, B.Sc., F.I.C., which we printed last week, raises a question of great importance to growers of fruit, to importers, and to jam makers. The phenomenally trying weather we have lately experienced, quickly causes fruit to set up fermentation, but for jam making, such fruit cannot justly be held to be unfit for use, and in each and every case where a demand for

condemnation be made, there may be a doubt if a magistrate acts wisely in giving an immediate assent. Opportunity should be allowed for having the fruit viewed by scientific experts outside those connected with the authority making the seizure. From investigations we have made into the most notorious of the recent seizures of alleged unsound fruit, we are inclined to regret that a more searching enquiry and examination of the whole of the fruit, comprising the consignment was not made, as, if the lots seized were in a state unfit for use as food—that is, were really in a putrefactive condition, a very serious question is raised, inasmuch as large quantities of fruit from the same consignment, stated to be in exactly the same condition, were allowed to be delivered and used for jam making at two large factories in the vicinity of the one where the seizure was made.

It may be that the overworked inspector could not like Boyle Roche's bird be in two places at once, for we do not suppose that it can possibly be the case that one firm may not look at the halter, whilst another may steal the horse, but one thing is certain, viz., that the fruit was of the same consignment, was in the same state, and if it was unfit for use in the one instance, it must have been unfit for use in the others. The question then arises—Why has there been nothing said, and why no seizures and prosecutions in the other cases?

MARGARINE AT BUTTER PRICE.

At Kensington on July 18, Frederick Brooke, grocer 40, Shepherd's Bush-road, was summoned by Inspector Oatley, of the Hammersmith Vestry, under the Food and Drugs Act for having sold butter adulterated to the extent of 75 per cent. He was further summoned for having sold margarine in a wrapper not properly printed. This shop of the defendant's is under management. The inspector, having proved the purchase and submitted the analyst's certificate, it was stated that defendant had been previously convicted. The Bench imposed a fine of £10. in the first case and £2 in the second, with costs.

At Lambeth, on July 20 Evan Evans of East-street, Walworth, was summoned by the Newington Vestry for selling as butter a mixture containing 88 per cent of margarine. Defendant said he sold it as margarine and wrapped it in a margarine paper. The boy who made the purchase on behalf of the inspector declared, however, that he asked for shilling butter, and inspector Dawson stated that, although the word "margarine" was on the wrapper, the article was wrapped up in such a way that the word was not visible. Mr Sheil ordered the defendant to pay a penalty of 20s. and 12s. 6d. costs.

At the same court recently, Edwin Morgan, of Linnell-road, Camberwell, was summoned by the Camberwell Vestry for delivering margarine to the purchaser otherwise than in a wrapper bearing the word "margarine." Mr. G. Warsden, solicitor to the vestry, appeared in support of the summons. Inspector Farmer gave evidence to the effect that a sample of margarine which was purchased at the defendant's shop on June 16, was served in plain paper. In answer to the summons, the defendant said he told the inspector when the purchase was made that he was in a bit of a muddle. He had the proper wrappers in the place. He pointed out that margarine was asked for and was supplied. Mr. Shiel: If margarine was asked for and was served in a plain wrapper it was a very trivial kind of offence. Mr. Marsden reminded

PURE, WHOLESOME, DELICIOUS.

BIRD'S CUSTARD POWDER

The unfailing resource of every Lady of the House
and successful Housekeeper.

NO EGGS! NO TROUBLE! NO RISK!

his Worship that it was an offence under the Margarine Act. Mr. Shiel ordered the defendant to pay a fine of 1s. and 2s. cost. Mr. Marsden asked for the costs of the analysis, 10s. 6d. It was necessary to have an analysis, in order to ascertain whether it was margarine or not. Mr. Shiel declined to allow the costs of the analysis, which he thought, was unnecessary. It was a mere technical offence, and ought not to have been brought forward at all.

At Dublin recently, Thomas Walsh, of 15 Mary's Abbey, was summoned at the instance of the Corporation for exposing for sale margarine to which there was not attached in such manner as to be clearly visible to the purchaser a label marked in capital letters "margarine." Mr. Nicholas Cloney, inspector, gave evidence to prove the offence. There was no label that could be seen. To Mr. Coffey—This was between five and six on Thursday evening, and the shop was being brushed up. Mr. Rice, solicitor, said the defendant was fined £1. on a former occasion. Mr. Mahony now fined him £2.

COPPER IN TINNED PEAS.

Mr. William Elliff, grocer, Yarm, was summoned at the County Petty Sessions, for selling preserved peas containing copper. A tin of peas was purchased at defendant's shop, and on being analysed they were found to contain half a grain of copper. The magistrates said that has it had been decided that copper was injurious to health they had no option but to convict. Though the defendant did not put the copper in the peas he was the responsible person under the Act, and he would be fined 1s. and 9s. 6d. costs.

MAIZE IN PEPPER.

At Clerkenwell, on July 19th George King, of 195, Central-street, St Luke's, was summoned for selling white pepper adulterated with 40 per cent of ground maize. Defendant, said he bought the pepper as genuine, and sold it as he received it. He produced the invoice. Mr. D'Eyncourt adjourned the summons, in order that the wholesale dealer should be summoned and both cases heard together.

MAIZE IN WHEAT FLOUR.

At Smethwick, on July 19th, Albert Blick, grocer, of Mornington-Road, Smethwick, was summoned for selling to the prejudice of the purchaser, flour adulterated with 10 per cent, of maize flour. Mr. Van Tromp (inspector under the Food and Drugs Act) prosecuted. The purchase of a packet of what was marked pastry "flour" was proved by an assistant to the inspector. Mr. Jones (County analyst) said the flour was adulterated with 10 per cent. maize flour. Maize flour was not deleterious or injurious to health, but was not so good as wheaten flour for breadmaking, as the

bread would be heavy. It would make very little difference in pastry. Mr. Caddick, who defended, contended that the purchaser had not asked for wheaten flour but simply for flour, and she had received what she had asked for; and, further, she could see from the label that it was pastry flour. There were several kinds of flour, and it had been held in the High Court that if a person asked for an article and received an inferior quality it was not to the prejudice of the purchaser. Mr. Van Tromp said that decision had been completely upset, and the High Court had held exactly opposite. The Bench fined defendant £1 14s., including costs. Henry Ramsell, grocer, of Middlemore-road, Smethwick, was fined a like amount for a similar offence.

SPURIOUS DEMERARA SUGAR.

Mr. CHARLES EDWIN CAWDELL, grocer, Yelvertoft, was summoned at Daventry for selling Demerara sugar not of the nature, substance, and quality demanded by the purchaser. The Crick Rural District Board prosecuted, the defendant pleaded guilty. Inspector Withers proved the purchase of a sample of Demerara sugar at defendant's shop, and this the analyst certified was not Demerara sugar, but crystals coloured with artificial dye. Mr. Cawdell informed the bench that he bought the article as genuine Demerara sugar, and paid Demerara price for it, viz., 16s. 9d. per cwt. The firm who supplied it informed him that it was pure West Indian sugar, classed as Demerara. The invoice also said it was Demerara sugar, and he sold it in good faith as such. The Chairman said that in face of the analyst's statement they had no alternative but to convict. Defendant would be fined 10s. and £1 7s. costs.

THE WATER AT SPIRIT PRICE GAME.

At the West Riding Court, on July 21st, John Woolford, landlord of the Unicorn Hotel, Carlton, was charged with selling whiskey which was not of the standard required by the Statute. Mr. Lodge appeared for the defendant. From the evidence of Mr. Ernest Crabtree, inspector under the County Council, and his assistant, Wm. Errington, it appeared that on Monday, the 26th of June, they visited defendant's premises, and Errington was sent into the Hotel to purchase a half pint of Scotch whiskey, for which he paid 1s. 2d. He was served by Mrs. Woolford, defendant being away at the time. He did not tell her what he wanted the article for, but Mr. Crabtree, who came in about a minute afterwards, did so. The whiskey was divided into three parts, one of which was left with Mrs. Woolford, and the inspector took the other two away, and sent one of these samples to the West Riding analyst. The certificate of the latter showed that the whiskey was adulterated to the extent of 19.5 excess of added water in addition to the 25 per cent. allowed. Mr. Lodge, in defence, urged that the officers ought to have told Mrs. Woolford at the time what the whiskey was wanted for. The landlord's son had added the water in his absence. He had conducted the house for over 16 years, and had never before had any complaint. He (Mr. Lodge) had advised the defendant to get a spirit tester, and use it in future, which he had promised to do. He asked the Bench not to inflict a heavy penalty. The Bench ordered defendant to pay a fine and costs, amounting altogether to £3 4s.

At the West Riding Court, on July 25th, Mrs. Annie Brookes, innkeeper of the Ball Inn, Cowley Hill, Hesley Bar, Chapeltown, was charged with selling adulterated gin. Mr. A. Muir Wilson appeared for the defendant. Mr. Joseph Wilson, inspector employed under the Food and Drugs Act by the West Riding County Council, said that he called at the Ball Inn and ordered a pint of gin. When he obtained this he told the defendant that he wanted the gin for the purpose of analysing it. The analysis showed that there were 40.5 parts of water in the gin. There was 35 parts allowed, so that the gin contained 5.5 parts of

water in excess. Mr. A. M. Wilson said that the firm supplying the defendant with gin, had declared it to be composed of 17 parts of water. She then, as usual, added water to the extent of a jack of water to a quart of gin, which added water until there were 30 parts. The gin had been kept in a jar, the lid of which was loose, and the gin had evaporated. A fine of 7s. 6d., including costs, was imposed.

At Farnham, John Sone, landlord of the Woolpack Inn, Elstead, was summoned for selling adulterated whiskey on June 30th. Mr. E. Jackson defended. Mr. Fredk. Cliffe, inspector to the Surrey County Council under the Food and Drugs Act, put in a certificate showing that a sample of the spirit he purchased from the defendant was $3\frac{1}{4}$ degrees under proof. For the defence, Miss Emily Sone, who manages her father's business, said that they only consumed a gallon of whiskey in six weeks. When they got the spirit they added a quart of water, and put it in the keg. Fined 2s. 6d., and costs.

PERJURY IN A MILK CASE.

JOHN ROWE, 49, dairyman, of Victoria-park-road, was charged on a warrant at North London Police Court, on July 24th, for committing wilful and corrupt perjury in giving evidence in the Police Court. On April 25th last, the prisoner was summoned to this Court for selling adulterated milk. The evidence of the sanitary inspector was that he stopped a boy with a can bearing the name "W. J. Rowe." He took a sample of the milk, and the boy said that the owner of the milk was John Rowe. But when the case was called on, the boy was not forthcoming, and the prisoner set up the defence that he was not John Rowe, but William John Rowe, and the milk from which the sample was taken was not his. The boy now gave evidence, and stated that the milk was really the prisoner's. A remand was ordered.

UNSOOUND FOOD:

Important Claim Against an Urban Council Fails.

THE adjourned claim of Herbert Swannach, fish dealer, against the Urban District Council of Gainsborough was held on July 25th, before the Petty Sessions. The plaintiff recently had a quantity of fish seized and destroyed by the Council on the certificate of a magistrate that it was unsound, but the subsequent prosecution was dismissed. He now claimed £9 10s. damages to cover out of pocket expenses and costs. Mr. Williamson (Bescoby and Williamson, Retford), appeared for the plaintiff, and Mr. Robbs for the Council. Mr. Williams quoted the cases of *Bater v. the Mayor and Corporation of Birkenhead*, and *Walshaw v. the Mayor and Corporation of Brighouse* in support of his contention that his client was entitled to recover damages, and urged that the jurisdiction of the Bench for that purpose was purely ministerial. If the claim were reasonable the magistrate must grant it, if not they could reduce it. In this case everything except loss of plaintiff's time was out-of-pocket expenses. Mr. Robbs, for the defence, denied liability. He admitted there would have been good grounds for a claim against the Council had the fish after being seized by the Council's officers not been condemned by a magistrate, but the fish having been condemned by a magistrate as unsound, the responsibility of the Council came to an end. The Bench retired to consider their decision, and after a lengthy deliberation the Chairman said: We consider that the plaintiff has not brought himself within Section 308 of the Public Health Act, 1875, under which this application has been made; neither do we consider that this case is quite upon all fours with the two cases quoted by the plaintiff. The Court considers that no decision was given on June 6th as to the soundness or unsoundness of the fish in question, and, therefore, we refuse the application. Costs followed the decision.

ADULTERATED CAMPHORATED OIL AND MAGNESIA.

At Swadlincote, Richard Smith, was charged at the instance of Captain Sandys with selling a quantity of camphorated oil, which was not prepared in accordance with the British Pharmacopœia, on April 17th. A similar offence was alleged against William Hart, a Woodville tradesman, and Arthur Mitchell Carr, chemist, Gresley, was charged with selling four ounces of heavy magnesia to the prejudice of the purchaser, in that it consisted entirely of carbonate of magnesia. In the case of Smith, Captain Sandys stated that there was not more than five per cent. of camphor, and 95 per cent. of mineral oil, whereas it should have contained over 21 per cent. Robert Tomlinson, assistant to the inspector, deposed to the purchase of the oil. Mr. F. A. Short stated that he made the customary division of the oil, and distributed it in the usual way. Defendant's wife said the oil was sold as she bought it, and she had neither asked for nor received a warranty. The Chairman said the Bench were unanimously of opinion that the defendant had not tried to defraud the public, and they hoped she would be able to get her remedy from the wholesale dealer. There would be a fine of 6d. and 23s. 6d. costs. In the case of Hart, for whom Mr. Timms appeared, Mr. Joseph Hewitt, county sanitary inspector, proved the purchase and division, and Captain Sandys produced the certificate showing the proportion of camphor that should have been present. A fine of 1s. 6d. and 18s. 6d. costs was imposed. Mr. Hewitt deposed to the purchase of the magnesia from defendant, having asked for heavy magnesia. Witness told defendant what he had bought the article for, and proceeded to divide it in the usual way, leaving one portion with the defendant. Nothing was said about the label at the time of purchase. He asked distinctly for heavy magnesia, and labelled the samples "heavy magnesia" without any remonstrance from the defendant. Captain Sandys put in the analyst's certificate, which stated that the sample consisted entirely of carbonate of magnesia. Defendant said there were two substances known as heavy magnesia, and unless he was asked for what was technically known as heavy calcine magnesia, he gave customers the same thing as supplied to Mr. Hewitt. By the Bench: A general customer would ask for heavy calcine magnesia if he required that sort. By Captain Sandys: There were two sorts of heavy magnesia in the British Pharmacopœia. The Bench adjourned the case for an hour to allow defendant to produce the British Pharmacopœia to prove his contention that there were two sorts of heavy magnesia mentioned. After examining the book, the Bench decided to impose the nominal penalty of 10s. 6d., including costs. They disallowed the analyst's fee, as the Bench did not think there was any wilful intention to defraud.

THE RECENT FRUIT SEIZURES.

MR. EDWARD MORGAN, who trades as Wix and Co., the jam makers, of Green-walk, Bermondsey, was committed to the sessions on July 31st, on a charge of having in his possession strawberries unfit for human food. The case was heard at Southwark Police Court by Mr. Slade. Mr. Horace Ivory prosecuted, and Mr. Muir was for the defence. On July 14th, defendant received at his factory a consignment of Dutch strawberries. They were in twenty-three tubs, and each tub contained about 90lbs. The fruit was delivered at eleven o'clock. At twelve, Mr. Thomas, the sanitary inspector to the vestry, visited the factory. Two tubs were already jam. The remainder he seized. He took them to the Police Court. Mr. Slade condemned the fruit, and it was destroyed. Mr. Muir recognised that the case must go for trial. If it were an ordinary case he should reserve his defence. But as so much absurd nonsense had appeared in the papers about it, he must take the earliest opportunity of refuting the statements which had been made. He called four witnesses for this purpose. The magistrate would not

settle the question of what is a good strawberry. He sent the problem up to sessions. The other summonses were adjourned for a week.

THE DEBATE ON THE SALE OF FOOD AND DRUGS BILL.

(Continued from page 368).

Mr. Kearley (Devonport), in opposing the amendment, contended that if they were to prohibit colouring in one direction they must do it all round. Many food products were coloured. Cheese, for example, was coloured, not with the idea of deceiving, but to meet the demands of a particular market. If they sent highly coloured cheese to Manchester people would not look at it. Macaroni, tapioca, even Demerara sugar were all coloured. If the principle contended for was admitted, it would be destructive of more interests than one in the country.

Mr. Grant Lawson (York, N.R., Thirsk) disagreed in this matter with some of those with whom he usually acted in behalf of the agricultural interest, holding, in view of the threat of the right hon gentlemen, that it was better to accept the Bill as it was, rather than risk losing it altogether. Besides, he hoped much from the vigorous and active administration of the President of the Board of Agriculture. He had no recollection that the proposed clause formed part of the programme of the Agricultural Union. Even if he had pledged himself to that programme, still, in view of the situation created by the declaration of the right hon. gentleman, he should vote against the clause.

Mr. Labouchere (Northampton) said he had taken margarine—(laughter)—and thought it a most excellent food, wholesome and nutritious, and, generally speaking, infinitely better than second-rate butter. His hon. friend had got margarine on the brain. He seemed to imagine it was a horrible, noxious compound not fit for a human being to eat. The truth was, it did not matter what a thing was made of, but what it was in the end—(laughter)—and in the end there was very little difference between margarine and butter. The fact was we had improved upon the cow to-day. (Laughter.) With regard to colouring, in Yorkshire there was no such thing as yellow butter in winter. When the animal was fed on dry food the butter was absolutely white, and a great Yorkshire agriculturist told him that if he sold his butter white in Leeds he would get 2d. per lb. less for it. He therefore put a few carrots or something else into the churn and the butter came out yellow. Margarine was just as good and wholesome as butter, and the poor man, if he was wise, bought margarine instead of butter. But he liked it better yellow than white. It appealed more to his eye. Why, then, should his hon. friend deprive the poor man of the pleasure, when he spread this compound on his bread, of seeing that it was yellow instead of white? As to the question of fraud, he suspected that the poor man knew perfectly well what he was doing, when he bought margarine. He was in no sort of way defrauded. This special legislation with regard to margarine was an insidious attempt at protection. (Hear, hear.) He was for the poor man being able to get an article, always precisely the same as butter, which came out of the factory instead of out of the cow, and which represented to him a saving of about 4d. per lb. (Hear, hear.)

Mr. Yerburgh (Chester) said this was no doubt, a question in which a great body of consumers were as much interested as agriculturists. He had sent a circular to a number of working men's associations to ascertain their opinions on this subject. He had received replies from thirteen associations, representing 332,638 working men, and all of them pronounced in favour of the proposals embodied in this clause. His contention was that if this particular substance was not allowed to be coloured to represent it as another article its price would fall. Most of the margarine which was

imported into this country came from Holland, and the question was whether this margarine was a wholesome article. The hon. member was proceeding to enlarge on this point when

The Speaker, interposing, said the hon. member appeared to be dealing with the whole subject. The only question before the house was as to the colour. (Hear, hear.)

Mr. Yerburgh said the members for Dundee and Northampton insisted that this was a wholesome article. He was endeavouring to show that in another country there was ground for believing that this material was not a wholesome article of food.

The Speaker: I think the references made hardly justify an inquiry into the whole manufacture of margarine.

Mr. Yerburgh contended that there were good grounds for believing that the margarine to which he referred should be regarded with the gravest suspicion. He was not referring to margarine manufactured in this country. He wished to refer to the threat which had been used that if they voted for this clause they should lose the Bill.

Mr. Long denied that he had used a threat, but the Government must be responsible for their own legislation. They could not be responsible for that which they believed would be injurious.

Mr. Yerburgh expressed his belief that the working classes were in favour of such a clause as this.

Sir W. Foster (Derbyshire, Ilkeston) challenged the latter statement of the hon. member, who spoke for probably not more than 1000 persons, and then claimed that 7,000,000 working men were on his side.

Mr. Yerburgh said the representative working-men in the House had spoken in favour of the clause.

Sir W. Foster said they would have an opportunity of expressing their views. He felt pretty confident that working men were not anxious to interfere with a wholesome article of food.

Mr. J. Lowther (Kent, Isle of Thanet) supported the clause, which did not interfere with the sale of margarine, but only provided that it should not be sold in a form to imitate butter. The proposal embodied in this clause was simply to ensure that the purchaser should be protected against fraud, and that he should know exactly what it was he was buying. No one wanted to stop the colouring of margarine merely for the purpose of interfering with the trade. The House was asked to prohibit a colouring which led to a false impression being made upon the mind of the purchaser.

Sir W. Harcourt (Monmouth) said he had seldom heard his right hon. friend, the member for Thanet speak, except when he saw an opportunity of getting in the thin end of the wedge of protection.—(Laughter.) Did anyone believe that this proposal was made except for the purpose of diminishing the supply of that commodity which was used as a substitute for butter?

Mr. James Lowther admitted that large quantities of butter were imported as well as margarine, and if he saw an opportunity of levying a tax on the importation of both he would gladly do so. (Laughter.) But he saw no such opportunity.—(Laughter.)

Sir W. Harcourt said the time was not quite ripe for that. That would be what he should call the thick end of the wedge—(Laughter)—but for the moment his right hon. friend was content with the thin end of the wedge. It was quite plain—he did not believe than anyone could honestly deny—that the hope and expectation of those who supported this amendment was that the quantity at present used of this article would be diminished. (Hear, hear.) The President of the Board of Agriculture made, in his opinion, a very sound and courageous speech. (Hear, hear.) The right hon. gentlemen had said, and it was perfectly true, that if they were to forbid the colouring of one thing they must forbid the colouring of all. So far

as butter itself was concerned, it was universal, or, at all events, a widely extended practice to colour English butter up to the mark represented by the highest quality, and, consequently, it fetched a higher price in the market. That was true, indeed, of all modern manufacture. Every manufacturer endeavoured to make his commodities look like something better than they really were to bring them up to the appearance of something which commanded a higher price, and from which consequently, there was a larger profit. But to suppose that a demand of the kind involved in the amendment could be made by a single interest in regard to a single article was really perfectly unreasonable. He agreed that the deliberate misrepresentation of an article as being what it was not should be put down by every possible means, but he believed that the proposal of the amendment was absolutely wrong, and would, if it produced the effects it was expected to produce, inflict great injustice upon the consuming classes of the country. (Hear, hear.) He should certainly support the right hon. gentleman if there was an appeal to the House.

Mr. Cavendish (Derbyshire, W.) said that as an agriculturist he should most strongly support the Government. He did not think a greater blow could be dealt at British agriculture than to pass an amendment of this sort. (Hear, hear.) It was an amendment which, if passed, would, he believed, have the effect of destroying the industry at which it was aimed. (Hear, hear.)

Sir T. Esmonde (Kerry, W.) said that it was unfortunate that the two front benches were joined in opposition to this amendment. The speech of the hon. member for Northampton in praise of margarine suggested a solution of the difficulty. Instead of being stamped deceptively with the figure of a cow, pats of margarine might be stamped with the figure of the hon. member for Northampton.—(Laughter.) This colouring of margarine to imitate butter was not an honest proceeding, for nine times out of ten margarine was sold as butter. (Hear, hear.)

Mr. G. Whiteley (Stockport): What is the colour of butter?

Sir T. Esmonde said that it was something the colour of the mace on the table.—(Laughter.)

Mr. Jeffreys (Hampshire, Basingstoke) said that he was grateful to the Government for this Bill, although he should vote for the amendment. The object of the amendment was simply to prevent margarine from being sold fraudently as butter; and if margarine was part of the working man's diet, there was the more reason for enabling it to be purchased at its natural price instead of at the price of butter. (Hear, hear.) In the case of margarine made abroad, care was taken not to allow it to be coloured to imitate butter. This was what was desired by this amendment, and if it were carried, the reform would be quite as much in the interest of the producer as the consumer. He intended to support the clause, and trusted that the fraudulent dealing with margarine would be stopped.

Mr. Colville (Lanark, N.E.) thought that the working classes were able to judge for themselves what was the most wholesome and desirable article of diet to obtain. In his judgment, any attempts to restrict the production or sale of margarine would be looked upon as a distinct return to protection. Even high-class butters were coloured, not because their quality was improved thereby, but because they were rendered more popular from the market point of view.

Colonel Kenyon-Slaney (Shropshire, Newport) warned his agricultural friends to consider whether it would be wise to assume an attitude which placed them in hostility to the masses of the people in the country. The agricultural community were not anxious that a crusade should be undertaken against the colouring of margarine as such, but their strong desire was that the fraudulent sale of margarine should be stopped. In this Bill the Government

undertook to deal with the fraudulent aspect of the question; and if the measure really checked the practice, then the object aimed at was achieved, and they had no right to press for further prohibitions. If, however, the measure failed to realise expectation in checking the fraudulent sale of margarine, the agricultural members would occupy strong ground in pleading for the introduction of an amending Bill. He thought it was best in the interests of agriculture and of fair-play to give the Bill a chance as it stood.

Dr. Clark (Caithness) looked at the question from the standpoint of those who would be compelled to carry out the Act. He had given some attention to this question as a medical officer of health and also from a scientific point of view. The assumption was made that butter had a colour. For example, butter from Ayrshire cows was almost pure white, and in Glasgow the best butter was sold as near white in colour as possible. On the other hand, the butter made from Jersey and Alderney cows was fairly yellow. What, then, was the standard of colour to be applied? In point of fact, there was no standard of colour by which to test each kind of butter. Margarine was fat taken from a dead animal, and it had no regular colour. The colour of the fat in Jersey and Alderney cows was much more yellow than in the Ayrshires, which was white; so that the House was being asked to determine a standard of colour when there was no standard provided. There was scarcely a pint of milk sold in London that was not coloured. If the clause were carried, and medical officers of health and magistrates tried to carry it out, it would be found to be impossible.

Mr. Balfour said he was the last man to deny the importance of the subject, but he ventured respectfully to suggest to the House that probably they had now heard most of the arguments for or against the proposition. In these circumstances, he would suggest, with great deference and respect, that perhaps it would be in the interests of the Bill, of business, and of the numerous persons concerned in the measure that the House should now be allowed to proceed to a division, if division, indeed, was necessary, and that the House should show, as he had no doubt it would by a very large majority, that it supported the view of his right hon. friend.

Sir J. Leng (Dundee) intimated that he would be content not to move his amendment.

Mr. Strachey (Somerset, S.), referring to the remarks of the right hon. member for West Monmouth, said that, if the fraudulent sale of margarine was stopped, he should be prepared to say that dairymen should be prevented from colouring milk, butter, or cream, so as to deceive the consumer.

Mr. Kilbride (Galway, N.) supported the proposed clause.

Mr. Maddison (Sheffield, Brightside) denied that working-class opinion was in favour of the amendment. On behalf of the great mass of poor, unskilled labour, he pleaded for the sale of margarine being allowed, coloured or not, so as to please the eye. Was there nothing in the feast of the eye as well as of the palate, and were they going to penalise poverty through the eye? Supposing a man sat down to a piece of bread and margarine coloured green—(laughter)—what a nice diet that would be. He thanked the right hon. gentleman for the stand he had made, for if this clause were passed it would be a cruel wrong for the poorest classes in the country. (Cheers.)

Mr. A. Cross (Glasgow, Camlachie) said there were two kinds of fraud this Bill ought to stop. The first was the substitution of margarine for pure butter. But there was a worse fraud than that, and that was that margarine was sold at about double its price. (Cheers.) If colouring were prevented, margarine would be sold at 4d a pound. (Hear, hear.)

Mr. Channing (Northampton, E.) said that some years ago he took part in the deputation to the President of the Local Government Board to urge the necessity of dealing with these frauds. The deputation was organised by the Central Chamber of Agriculture, and upon it were representatives of all the great co-operative associations in the country. He contended that three-fourths of the margarine sold in this country was sold as butter, and it would not be rash to estimate that the fine thus imposed on the very class for whom his hon. friend the member for Sheffield spoke amounted to a million and a half sterling every year. (Hear, hear.) He should unhesitatingly support the amendment because he believed it would protect the pockets of the poorest class in the country. (Hear, hear.)

The House divided, when the numbers were :—

For the clause	...	...	...	68
Against	...	...	...	297
Majority against				229

General Laurie (Pembroke and Haverfordwest) said he had a new clause which he proposed to move in lieu of Clause 19, which it was proposed to omit. His clause sought to provide that a warranty should only be accepted—(1) where the package remained intact and bulk had not been broken; and (2) where there was an intention on the part of the person proceeded against to rely upon a warranty as a defence. The person so proceeded against should forthwith give written notice to the court that he held a warranty. Going on to explain further the purport of his clause, the hon. and gallant member declared that if Clause 19 was left as it was they might as well throw the Bill into the fire. He moved the new clause.

Mr. Long hoped that the new clause would be withdrawn, as he expected shortly to be in a position to move amendments carrying out the views on this subject expressed in every part of the House, namely that the difficulty as to warranty, which was a very real one, ought to be met.

General Laurie said under the circumstances he was willing to withdraw his clause.

After some conversation, Mr. Long said that certain difficulties had been pointed out as to prosecutions. There had been cases where adulteration had been proved, and where the liability for adulteration had been shifted from the shoulders of the first person summoned to somebody else from whom a warranty was produced. There was, therefore, a difficulty in continuing the prosecution and securing a punishment, and they hoped to put into Clause 19 some amendments which would remove that difficulty. (Hear, hear.)

The amendment was, by leave, withdrawn.

Mr. Strachey moved the following new clause :—“It shall be unlawful to sell or import any milk, cream, condensed, separated, or skimmed milk to which any colouring matter has been added.” He referred to the deception which was practised upon mothers by the addition of colouring matter to condensed or separated milk and to the injury which was inflicted upon the children and infants who were reared upon it. This colouring matter invested the condensed and separated milk with the appearance of the very best milk, whereas, as a matter of fact, it simply concealed a very inferior article. The Medical Officer of Health to the Camberwell Vestry had stated that 40 per cent. of the deaths among the children in that district were due to the use of this condensed, separated milk, which, he declared, was no more than giving the children chalk and water. Milk of every kind ought to be sold entirely on its merits without the addition of any colouring matter whatsoever.

Mr. Long said he was afraid there was a larger consumption of skimmed or separated milk by the children of the poorer classes than they could wish from the point of view of health. But he doubted very much whether the

actual colouring of the milk gave it a special advantage. If they were to deal with the difficulty which had been suggested they would have to adopt a different method of treatment than proposed by the hon. gentleman. It was suggested that they should prohibit colouring in regard to skimmed, separated, and other milk, because it gave the milk a fictitious value, but he thought they should want stronger evidence than had yet been given to the House as to the effects of a prohibition of that kind before they could accept the amendment of the hon. gentleman opposite. (Hear, hear.)

Dr. Clark said that the amendment would strike a terrible blow at the dairy trade, if condensed milk were not separated from ordinary milk.

Mr. A. J. Moore (Londonderry) said that he could not understand why there should be such a desire on the Opposition side of the House to protect every kind of fraud, or why the Government should be afraid of dealing with fraud.

Mr. Robson (South Shields) said that the clause could be cut down to apply only to condensed milk, and in that form he should support it. The case of coloured milk was quite different from that of margarine, for in the former case the colouring deceived parents and involved suffering to the children who were fed on the milk.

Mr. Radcliffe Cooke (Hereford) said that he should vote for the amendment.

Sir W. Forster said there could be no doubt that a gross fraud was perpetrated on the public by the colouring of milk, and that thousands of children were starved to death by being fed on condensed milk imported from abroad. But the fraud would be stopped to a large extent by Clause 1 of the Bill, which required separated or skimmed milk to be so labelled. A departmental committee was now sitting on the question of coloration, and it was therefore not advisable to press the clause.

Mr. Muntz (Warwickshire, Tamworth) thought that the Government ought to take the strongest steps to prevent this fraud. He should vote for the amendment.

Captain Sinclair said that it had not been proved that colouring matter was directly injurious to itself; and the provisions of the Bill were sufficient to ensure that the nutritious qualities of the milk were not abstracted.

Mr. Humphreys Owen (Montgomery) said that the colouring matter was injurious, because it deluded the purchaser into believing that the milk was of good quality. All they asked for was that the dealers should be compelled to sell milk as it was, and not as dealers would wish the people to believe it was. He supported the amendment.

Mr. Bartley (Islington, N.) urged that as the object of the Bill was to prevent fraud, great cities should be protected from such adulteration as the amendment specified.

The Solicitor-General (Sir R. Finlay) reminded the House that the provisions of the Act of 1875 already dealt with the subjects mentioned in the amendment, and imposed a penalty not exceeding £20 for their infringement. No one pretended that in the case of condensed or separated milk the colouring matter did any harm. The fraud consisted in selling poor milk as if it were good milk. Inasmuch as the House had already decided not to interfere with the addition of colouring matter in the case of margarine, he thought it would be taking a questionable step were the House now to deal with colouring matter in the case of milk.

Mr. Bryce (Aberdeen, S.) said that the existing law had confessedly failed. A great quantity of this inferior milk was, in point of fact, sold in defiance of the provisions of the Act of 1875, because the class to whom it was sold were both ignorant of the law and how to enforce it. The amendment, however, went to far, and he thought that the first clause of this Bill provided a new remedy, which was

more likely to be efficacious for the protection of the humbler classes than the existing law.

Captain Norton supported the amendment, on the ground that the public were defrauded by the addition of colouring matter to milk.

The House divided, and the number were—

For the clause	57
Against	238

Majority	181
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Mr. Strachey moved to insert a new clause providing that "It shall be unlawful to sell or import for sale any liquid under the name of cider or perry unless made from the juice of apples or pears only."

Mr. Radcliffe Cooke supported the proposed clause, and stated that since the trade in these liquors had revived, some persons had found it profitable to produce so-called cider and perry which did not contain a single ingredient naturally belonging to apples or pears. There was on the market a "champagne cider" which an analyst who had analysed the liquor for him declared did not contain a trace of apple juice, but that the flavour of fruit given to it was produced by a drug which he was informed had a very deleterious effect upon the heart.—(Laughter.) He noticed that people dropped off very often from failure of the hearts action, and he was inclined to think this was in consequence of the adulterated things they got to drink.—(Laughter.) He produced a label from a bottle containing "Paris champagne cider. Protected by registration. Highest awards, London, Newcastle, 1877," etc., and the analyst again reported that the liquor had never seen an apple. There was a further mischief which followed from this—namely, that people got an erroneous idea of what good cider and perry ought to be, and when anyone gave them a good glass of the genuine article they declared it was not cider and perry at all. That was injurious to the producer. This was the only agricultural interest left in this country which was capable of indefinite expansion, and he hoped it would be protected in a legitimate way.

Mr. Long thought that his two hon. friends had hardly realised the full extent to which the clause asked the House to go. The existing law with regard to adulteration was, he was advised, sufficient for the purpose. If anyone sold cider which contained no apple they would clearly be selling an article for which the purchaser did not ask, and could be proceeded against under the Adulteration of Food Acts. In the circumstances, he hoped his hon. friends would be satisfied with having raised the subject.

The clause was negatived without a division.

Mr. Channing then moved the following new clause:—"It shall be unlawful to sell or import for sale any margarine, butter, milk, cream, or bacon with which boracic acid, salicylic acid, formalin, bisulphite of lime, or other preservative excepting salt has been mixed." He said the question raised by the clause was of great importance to the public health. It was notorious that using preservatives and antiseptics had grown to enormous proportions during the last few years. Food was daily placed on our tables which was dosed ten or a hundred-fold beyond the amount which science declared a human being could safely consume. There was a complete uniformity of opinion among medical experts in favour of some such clause of this. Not only the importer, but also the retailer, made use of drugs as preservatives, and each might add his own dose. No doubt the right hon. gentleman in charge of the Bill would reply to him that he had appointed a committee to deal with this question, but he would like to know whether that committee might be looked to to lay down what was a safe proportion of these drugs to be used in the preservation of food, and whether, if they did lay down that proportion, the right hon. gentlemen would be prepared to give effect to their

recommendations by legislation or Order in Council during the ensuing year.

Mr. Long said there could be no doubt that this was a question of the very greatest importance in this sense—the use of these preservatives could be very easily abused, and the results of their abuse might be most injurious to human health. But, unfortunately, they had not up to the present knowledge as to the effect of these preservatives which would enable them, if necessary, to put the existing law into force. The hon. gentleman asked him what was the object of the committee which his right hon. friend the President of the Local Government Board had appointed. The object was to examine precisely those questions to which he had referred—namely, the use of preservatives, and to ascertain whether that use became injurious to health. They hoped that the inquiry would result in giving them some definite information with regard to this matter. If they were able to lay down rules there would be no need for issuing an Order in Council or for fresh legislation; the existing law would be sufficient. If the preservatives were not injurious, then he conceived that the House would not dream of prohibiting their use for a proper purpose.

Dr. Clark asked for the names of the committee.

Mr. Long said the names had already appeared in the *Times*. (An Hon. Member: "Not in the other papers?") He could not say. No doubt they had appeared in the other papers, but, as it happened, the *Times* was the only paper which he had seen, and he mentioned it. (Hear, hear.) He gathered from the opening remarks of the hon. member that all he wanted was to raise a discussion and elicit information as to the appointment of this committee and the work it was intended to do.

Mr. Strachey urged that the amendment of the hon. member for Caithness, which provided that every man should know exactly what it was he bought, should be accepted later on.

Sir W. Foster pointed out that they could not quite follow the example of other countries in the matter, as England was a larger importer of food than they were. The departmental committee which had been appointed was most qualified to inquire into the subject, as it had all the elements necessary to arrive at a sound conclusion.

Mr. Kearley thought his hon. friend would be perfectly satisfied with the assurance given by the right hon. gentleman.

Mr. Gibson Bowles (King's Lynn) said the proposed clause prohibited the use of every preservative except salt. He thought it would be an enormous mistake, and a dangerous thing, to enter into these details.

Dr. Clark advised his hon. friend to accept the suggestion of the right hon. gentlemen, and wait until the committee reported.

Mr. Channing asked the right hon. gentleman whether he proposed under Clause 4 of the Bill to make regulations dealing with the quantity of preservatives that might be added before or after the committee had reported.

Mr. W. Long said he could not make any regulation as to the quantity of preservatives until they had the report of the committee before them.

The motion for the second reading of the clause was, by leave withdrawn.

Mr. Lough moved to insert at the beginning of Clause 1, the words "butter and cheese." A great deal of bad butter was imported into this country and bad cheese other than margarine, and he argued that equal information should be given as to this trade.

The Solicitor-General could not understand the introduction of good butter and cheese into the list of questionable articles as to which the clause provided precautions.

(To be continued next week.)

THE NOTIFICATION OF ADMIXTURE.

By AN INSPECTOR OF WEIGHTS AND MEASURES.

Under the Sale of Food and Drugs Act great difficulty is at times experienced in bringing charges of adulteration home, owing to superstition as to the effect of notifying to a purchaser that an article is mixed.

Many decisions have been given by the Court of Queen's Bench upon points of law arising in cases where notification of admixture has been given. It is of course well known that the Judge's do not interfere with questions of fact; but a warning note must be here given, and that is:—All questions of law are mixed up with fact in a greater or lesser degree. If this be borne in mind it will no doubt help to elucidate many cases that appear abstruse and contradictory in the judgments.

In the resumé I propose to give it is not intended to quote all the cases at length, and not even to attempt a digest of each, but it is the idea of the writer to attempt to classify and possibly harmonize seemingly contradictory Special Cases, intended to interpret the Statutes under notice.

All the High Court Cases may be placed under about three heads, namely:—

- (1) Where the article bought is an article of commerce not usually mixed with another article.
- (2) Where the article is one where admixture is made to render the article fit for commerce.
- (3) Where the article is one sometimes sold pure and sometimes sold in a mixed state.

If these three divisions are carefully borne in mind it will, in the opinion of the writer, enable seemingly contradictory judgments to be clearly distinguished, for each case must, to some extent, stand alone, but not altogether, because the cases are but interpretations of the Statutes based upon settled principles of Law, usually termed Common Law. Where we get Common Law from no man can really and truly say, though we may safely say, it is partly from the heaven above and partly from the earth beneath. These principles are only to be found in books on Common Law, and even then one must not expect to imbibe them right off, but this can only be accomplished by stern and unflinching study of all points given.

If I were asked "What books would you recommend for study in order to obtain a thorough knowledge of the history of a country?" My answer would be "Read its Statute Book and interpretations thereof given by the judges, for here you will find in date order the wants and desires of men, crises, and deedes; filling up as it were the gaps of time and sense."

This then is to be the basis of the article now submitted for consideration by the colleagues of the writer.

It is the frank opinion of the writer notwithstanding very many adverse comments on the matter, that the draftsman of the Sale of Food and Drugs Acts, has performed a monumental work and deserving of more kind expressions than has hitherto been accorded. For it must be remembered he had a most difficult and onerous task to perform. In that he had to guard against interfering with freedom to buy and sell. And when one considers the almost confounded state of commerce in the matter, it is a subject for congratulation that he has interfered so slightly with the "Liberty of the Subject," in matters of barter. I know full well that some hypochondriacal individuals would have an officer of the law at the elbow of all would be purchases. This is not the way, however, to improve the commercial instincts of our race, this is best done by inculcating principles of self-reliance. For self-reliance is the foundation upon which our great position as a commercial people is built. Caveat emptor is the motto here, that is, let the buyer beware?

A great number of people quote cases bearing on

Whisky as if such cases possessed an innate standard of value. As a fact I put such cases into Class 3. Spirits being sold pure as alcohol and impure as Whisky, etc., hence it is a question of fact for magistrates to consider as to whether a person is prejudiced by having sold to him the Devil in a more or less dilute condition. Of course if one pays for the Devil as such by all means let him have value for his money. Whiskey has an almost unchangeable standard of value, this we see every day in that the more it is put down the less does it rise.

Does Notification Prevent Prejudice?

A very great deal of importance hinges upon the above question. After years of experience of the Acts and conducting hundreds of prosecutions, I am clearly of opinion that notification does not prevent prejudice in cases where the adulteration fraudulently increases the bulk, weight or measure of the food or drug sold.

A case in point, "An inspector asks for 'A pint of new milk?'" the reply is, "I have only milk and water!" Does that protect the seller? Let us see.

Section 6 of the principal Act states that: No person shall sell to the prejudice of the purchaser any article of food or any drug which is not of the nature, substance and quality of the article demanded by such purchaser, under a penalty not exceeding twenty pounds; provided that an offence shall not be deemed to be committed under this section, in the following cases; that is to say:—

- (1) Where any matter or ingredient not injurious to health has been added to the food or drug, because the same is required for the production or preparation thereof as an article of commerce, in a fit state for carriage or consumption and not fraudulently to increase the bulk, weight or measure of the food or drug, or conceal the inferior quality thereof; (I omit sub-secs. 2 and 3)

- (4) Where the food or drug is unavoidably mixed with some extraneous matter, in the process of collection or preparation.

Now all these exemptions must be proved by the defendant, and in the case of milk and water he (the defendant) is bound to prove and the justices bound to find, that the water has not been added to fraudulently increase the bulk, weight or measure. Hence my opinion that the notification that a man sells milk and water by such seller is of no avail, because added water is not needed to make it fit, or to prepare it or produce it as an article of commerce.

But it may be argued, how can you reconcile the case of *Sandy v. Small*? In this case the article sold was whiskey, and water is necessary for the production or preparation thereof as an article of commerce, pure alcohol is a drug, whiskey is a drink for man, hence is classed as a food.

Now the quantity of water in spirit is judged solely on the question of prejudice, and prejudice is not confined to monetary damage, but, if a prescription be made up wrongly either too much or too little of the various ingredients implies such.

In *Doyle v. Hutchinson*, Mellor, J., said, "The offence intended to be prevented by the Act was the fraudulent sale of articles, adulterated by the admixture of foreign substances, which would necessarily be to the prejudice of the purchaser, and these words were inserted only to require that such adulteration should be shown to have been made."

Nothing surely can be more clear than this, In affect it is notification or no notification, if the food or drug has been fraudulently adulterated then the vendor is liable. Again in *Hoyle v. Hitchman*, Mellor, J., said, "The prejudice contemplated was not confined to a pecuniary prejudice, for it would very much diminish the probability of bringing home offences against the Act to those who were guilty, and this was a sufficient argument against such a reading."

It appears thus that the whole fabric of society is prejudiced by every single act of fraud, lying, and deceit

(To be continued next week.)

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ADULTERATED CAMPHORATED OIL AND SWEET NITRE.

At Barnsley on August 2nd two prosecutions under the Food and Drugs Act were heard. In the first case, Christopher Yardley, grocer, draper, and general dealer, of Roystone, was charged with selling camphorated oil which did not comply with the requirements of the British Pharmacopœia Act, 1898. Messrs. J. Raley (Messrs. Dib and Clegg) defended, and pleaded guilty. He pointed out that the oil was purchased before it became a standard drug, and defendant, not being a chemist, did not understand it. Fined 10s. and costs.—In the second case, Jeremiah Woffinden, shopkeeper, Penistone, was charged with an offence of a like nature, by selling sweet nitre, which was not in accordance with the requirements, at Penistone. A fine of 10s. and costs was also imposed.

"GOLDEN SYRUP."

At Glasgow on August 2nd, before Sheriff Guthrie, Watson Hamilton, grocer, was charged with having on 30th June, in his shop at 211 Main-street, Rutherglen, sold a 2lb. tin of "golden syrup," which was not of the substance and quality demanded, in respect that it contained 70 per cent. or thereby of starch glucose, which is extraneous to "golden syrup." A plea of not guilty was tendered, accused stating that his wife had charge of the shop and he knew nothing of the matter. It was his shop. William Weir, sanitary inspector for the burgh of Rutherglen, stated that on the date mentioned he asked Mrs. Hamilton for a 2lb. tin of "golden syrup," and received that produced, which was labelled "the Morning Brand, finest Golden Syrup, made from pure cane sugar. Especially prepared for table use. Wholesome, nutritious, and delicious." There was no manufacturer's name on the label. He paid 5½d. for the tin, and informed the seller that it was for the purpose of public analysis. A portion was submitted to Mr. Tatlock, who certified that the article contained 70 per cent. of starch glucose. Corroborative evidence was given by Police Sergeant George Wilson. For the defence, Mrs. Hamilton admitted selling the tin of syrup produced. It was bought in November from James Munro, wholesale grocer and provision merchant, 42, St. Enoch Wynd West Howard-street, Glasgow. The Sheriff—Well, if that is the case, he also should be reported. The Fiscal admitted that it was a hardship that the retailer should be punished, but he was specially protected by the Act, having recourse against the wholesale merchant whereby he was able to recover the penalty if such was imposed. A fine of £3 was inflicted, the Sheriff reminding accused that he was able to recover the money from the wholesale dealers, and he ought to "make Munro pay up."

THE FULHAM ALLEGED UNSOUND HAM CASE.

At West London Police Court on August 3rd, before Mr. Lane, Q.C., some scientific evidence was produced on an adjourned summons against Messrs. Beasant and Fry, of 770, Fulham-road, for selling a piece of cooked ham which at the time of exposure was unsound. Mr. Blanco White prosecuted on behalf of the Fulham Vestry, and Dr. Cooney was for the defendants. It was alleged for the defendants that the ham was sound, and that it became fly-blown after the purchaser had taken it home and left the bone to which the meat was attached in the paper all night. John James Macdonald, traveller, of Siggs and Co., of the Borough, said the firm supplied the defendants with sides of bacon, the finest which could be bought in Denmark. The sweeter the meat the quicker it would be blown. Germs could be seen through a microscope in three hours after a fly had alighted on a piece of bacon. In eight hours the bacon would be swarmed with maggots.

Food and Sanitation.

SATURDAY, AUGUST 12, 1899.

SPURIOUS DEMERARA SUGAR.

At Caerphilly on August 1st, W. Hooper, grocer, Llanbradach, who was represented by his wife, was charged by Inspector Roberts with selling him on June 28th a pound of Demerara sugar which was adulterated. The analyst's report stated that the sample consisted of sugar crystals dyed with a trace of artificial colouring matter. Defendant pleaded that the sugar was bought from another trader. The Bench imposed a fine of 2s. 6d. and 15s. costs, and advised defendant not to purchase any more sugar without a warranty.

In cross-examination the witness said the bacon would be cured in Denmark and smoked in London. The meat would not become putrefied in eight hours. Dr. J. C. Jackson, the Fulham Medical Officer of Health, said he had made experiments with the blow fly and found maggots developed after twenty-four hours of the deposit of the egg. He could not detect any movement in three hours. In twenty-four hours the size of a maggot would be the twelfth of an inch. Flies were attracted to any organic matter in a state of putrefaction. In the case of cooked meat putrefaction would take place rapidly in hot weather. In his opinion the ham was not properly cured. By the Magistrate—He had never made experiments of this kind before. Evidence was given with reference to the character of the blow fly and blue bottle, one scientific gentleman stating that there was no difference. Dr. Barker, who made experiments on fresh-cooked ham, and watched the laying of eggs for twenty-four hours, said there was a movement of the germs at the end of three hours. There was a great difference between a blow fly and a blue bottle. In the former it took a year to develop. After some further scientific evidence, Mr. Lane, Q.C., addressed Mr. Blanco White, and said in the face of it there could not be a conviction. He dismissed the summons. Dr. Cooney applied to the magistrates to grant costs. Mr. Lane, Q.C., declined to grant any, at the same time remarking that if the sanitary authority had not gone into the matter they would have failed in their duty.

MARGARINE AT BUTTER PRICE.

At Lambeth Police Court, on August 3rd, Thomas Hawkes, of Albany-road, Camberwell, S.E., was summoned for selling butter not of the nature, substance, and quality demanded. There was a second summons against the defendant for exposing margarine for sale by retail without having the same properly labelled. The public analyst certified it to contain 67 per cent. of margarine. For the defence, Mr. Armstrong produced a certificate from another analyst who stated that there was no proof of adulteration. In view of this divergence of opinion between the analysts it was decided to submit the third portion of the sample for examination at the Government Laboratory at Somerset House, and the hearing of the summons was accordingly adjourned. The second summons against the defendant for exposing unlabelled margarine for sale, was dismissed, his worship declining to hold that a tub of margarine was a package within the meaning of the Act.—William Harding, of Commercial-road, Peckham, was summoned for selling as butter a mixture containing 30 per cent. of margarine. Mrs. Harding, who answered the summons, said the mixture was supplied by the wholesale people as butter; and Mr. Marsden, the Vestry's solicitor, said the Vestry had reason to believe that that was so. Mr. Sheil fined the defendant 10s. and costs.—Walter Ballard, of York-Street, Walworth, was summoned for selling butter containing 53 per cent. of margarine. Defendant was ordered to pay 10s. and costs.—Philip Muse, of Ash-street, Newington, was summoned for selling butter containing 64 per cent. of margarine. Defendant was fined 10s. and costs.

COPPER IN PRESERVED PEAS.

At Tottenham Police Court, on Aug. 3rd, Tyler and Brasher, grocers and provision dealers, Essex-road, Islington, N., were summoned by Inspector Bridge for selling peas which to their knowledge were coloured with sulphate of copper so as to render them injurious to health; also for selling peas which were not of the nature, substance, and quality demanded but were peas adulterated with sulphate of copper to the extent of 2.5 grains to the pound. Mr. F. W. Beck appeared for the defendants, who pleaded not guilty. Inspector Bridge gave evidence as to the purchase of a tin of peas manufactured by George Delidet & Co., Bordeaux, at the defendants' branch shop

at Wood Green. Mr. Edward Bevan, Middlessex County Analyst, said that copper salts were a well-known poison. There was about five times as much copper in the peas as was required to preserve them; and he was of opinion that peas so coloured were injurious to health. Dr. Daly (the chairman): Does the combination of colouring matter with the copper intensify the poisonous effects of the copper? I should say not. In reply to Mr. Beck the witness said he knew that Professor Tschirch, the Austrian authority, fixed 2.5 grains of copper to the pound as the maximum safe quantity, and owing to diversity of opinion the Government had appointed a departmental committee to investigate the question of food preservatives. Dr. E. J. Donbavand said that peas which contained 2.5 grains of copper would be decidedly injurious to health. The Chairman: What is the medicinal dose of copper? From a quarter of a grain to a grain. Mr. Beck: I suppose you have never in the course of your experience heard of any person receiving any injury whatever from coppered peas? It is a fact that there is no case on record. Witness said that he thought he read of a case in the *Lancet* in 1892. It happened in Trinidad. In further cross-examination witness said he was aware that opinions differed very largely as to whether copper was an active poison or not. Mr. Beck urged that the second summons must fail, as anyone who bought peas in tins must know that he was buying an article which had gone through a process of preservation. With respect to the other summons, the object of the Act was not to prevent the admixture of a foreign ingredient, but the admixture of so much as to be injurious to health. No person would think of eating a whole tin or half a tin of peas, and it was ridiculous to suggest that an ordinary helping of these peas would be harmful. Dr. Winter Blyth had stated that when copper was present in peas in the quantity of 2 to 2.6 grains to the pound it could not be said, in the present state of scientific knowledge, that the article was rendered injurious to health. This point was argued out in a case at the London Sessions. There three grains of copper sulphate were used, and the evidence had gone to show that all over 2.5 grains was harmful. The end of the judgment was to the effect that it would be mischievous to countenance a larger proportion than 2.5 grains. Apart from the question of injuriousness, it must be proved that the defendants not only knew that the peas contained a foreign substance, but that they contained it in such quantity as to make them injurious. The defendants were unaware of this. They were obliged to stock tinned peas, and they bought what they considered was the best brand. The Chairman suggested that they could have opened a tin and had the peas analysed. Mr. Beck said that different tins were likely to give different results. Besides, such a thing would be a heavy tax on the shopkeeper. It would have been fair and wise of the County Council before authorising this prosecution to wait for the result of the investigations of the Departmental Committee, seeing that at present this was purely an academic question. In the event of the Bench not dismissing the summonses he asked them to adjourn them until they had the committee's report. Mr. Brasher, one of the defendants, said he had no knowledge that the peas contained a quantity of copper which rendered them injurious to health. He admitted that he had seen cases of this kind reported in *The Grocer*. The Bench held that the peas were coloured in such a manner as to be injurious to health, and that the defendants did not use reasonable diligence to ascertain the fact. They fined them 20s. and costs on the first summons. The second summons was withdrawn.—Henry Green, of 565, Green-lanes, and Henry Strong, of 607, Green-lanes, Tottenham, were similarly summoned. Green was fined 5s. and costs, and Strong 10s. and costs.

At Staines, on July 31st, Budgen & Co. (Limited) were summoned for having sold bottled green peas which had been mixed or coloured with copper equal to 2.4 grains of copper sulphate per pound. There were two informations relating to one purchase, proceedings being taken

under Sections 3 and 6 of the Act. Mr. F. W. Beck (Neave and Beck, Lime-street, E.C.) appeared for the defence. Inspector Tyler said that Messrs. Budgen & Co., were traders of the highest repute, and no imputation whatever was made against them. In cases of this kind, however, it was necessary to proceed against the retailers. It was an open question whether deaths had not recently taken place in London from consumption of the same class of goods. On June 19th, he visited defendants' Staines establishment, and after purchasing another article (proved to be perfectly genuine) he bought a bottle of green peas, for which he paid nine-pence. By Mr. Beck: Witness had taken samples of other goods from the same establishment on many other occasions and found them satisfactory, and that was the experience of inspectors who visited other premises of the company. The bottles of peas were stacked on the counter; they had been supplied by Petty, Wood & Co. Mr. Edward Bevan, county analyst, said he was of opinion that copper sulphate in the proportion mentioned was injurious to health. By Mr. Beck: Some authorities held that copper sulphate to the extent of 2·6 grains per pound was not at all injurious. There was a Government inquiry now proceeding, and he had no doubt that it would embrace the question as to copper in peas. Dr. C. D. Morris considered 2·4 grains of copper sulphate per pound would be injurious to health. He had had personal knowledge of poisoning by pickles, having had a case of the kind last year. By Mr. Beck: Without colouring matter the peas would probably not be so attractive. Mr. Beck pointed out that it was not alleged that any imputation could lie against the defendant company. The case differed very much from the case of a man accused of selling chicory for coffee, or margarine for butter, the peas being sold in precisely the same condition as they were received. There was no proof that the article sold was injurious to health. It was admitted that other authorities held that 2·5 grains of sulphate per pound, or even 3 grains, would not render the peas injurious to health, and in support of this view, he cited the case of *Grist v. Summers*, which was dealt with on appeal to the County of London Sessions, and in which, he said, he happened to have been concerned. In that case all the authorities were quoted, and a very elaborate judgment was given. His clients had sold the peas in the same condition as they were received. Directly the inspector asked if the purchase should be divided, the manager said there was no need to do so, and his reason for making that statement was that the goods had been supplied by Petty, Wood & Co., from whom he had received assurances that they might be sold with perfect safety. He naturally relied upon the statement of an eminent firm like that; indeed, it would be impossible for retail dealers to adopt any other course. The peas were bought at 8d. per bottle and sold at 9d. The Local Government Board had appointed a committee to investigate and report upon the subject of preservatives, and he therefore urged that, as there was no real danger, county authorities should in the meantime hold their hands and wait for instructions. Mr. Harry Gray, manager of the Staines establishment, said he ordered the peas in question from the traveller to Messrs. Petty, Wood & Co., from whom he had received verbal assurance to the effect that the company would be perfectly safe in selling them. The peas were sold up to the time that he received the summons, when he stopped the sale at once. He had no knowledge that it could be alleged the peas were injurious to health. Mr. E. Budgen, jun., a director of the defendant company, said there was a printed form of instructions for the guidance of managers, and great care was exercised in the conduct of the businesses. The Chairman: There is no doubt about that. Mr. Budgen, continuing, said he had given instructions that tinned or bottled goods were not to be bought which were not above suspicion. Mr. Gray had acted quite within his orders in buying from Messrs. Petty, Wood & Co., from whom they had an assurance as to the safety of the goods, whereas another firm required them taken at the company's risk. There was a difference of a shilling per dozen in the prices, that of Petty,

Wood & Co., being the higher. Witness believed that the company was absolutely safe in selling the goods. Mr. Beck: Had you any knowledge that the peas contained copper in such quantity as to be injurious to health. Certainly not; we believed them to be perfectly safe.—And you relied upon the assurance you had from Petty, Wood & Co. in regard to them? Certainly. The Chairman said the bench had come to the conclusion that there must be a conviction. There was not the least doubt that Messrs. Budgen and Co. sold the peas precisely as they bought them from the wholesale house, and that they were under the impression the bottle did not contain enough copper to be injurious to health. But the evidence before the bench was that it was injurious to health, and that evidence had not been refuted. The bench must base its decision upon it, and there would be a fine of 20s. and costs. Mr. Beck urged that there should not be a conviction under Section 6, and Mr. Tyler mentioned that the county authority would be perfectly satisfied with a penalty in respect of one information. The Bench then imposed a fine of 20s. and costs, including the county analyst's fee and a guinea for Dr. Morris. Notice of appeal was given.

THE NOTIFICATION OF ADMIXTURE.

BY AN INSPECTOR OF WEIGHTS AND MEASURES.

(Continued from page 382.)

Fraudulent Admixture.

Now, according to "*Holland's Jurisprudence*," "the essentials of a fraudulent representation according to English law are that it is: (1) untrue in fact; (2) the person making it does not believe it to be true; (3) and is made for the purpose of inducing another to act upon it.

'It has been laid down in the case of Evans v. Edmonds, 13 C.B., 786, Cf. Arkwright v. Newbold, 17 Ch. D., 220, that if a man, having no knowledge whatever upon the subject, takes upon himself to represent a certain state of facts, he does so at his peril, and if it be done either with a view to secure some benefit to himself or to deceive a third person, he is in law guilty of a fraud; for he takes upon himself to warrant his own belief of the truth of that which he asserts. Although the person making the representation may have no knowledge of its falsehood, the representation may, nevertheless, have been fraudulently made.'

Thus we find the why and the wherefore of the question as to the liability of agents, plainly put it is that all agents should enquire into the quality and general honesty of the descriptions applied to goods. And if he fails so do he is liable.

High Court Cases.

Alcohol in its pure state is a drug, and is also sold as Proof Spirit and as Rectified Spirit, and as Whisky, Rum, etc.; and its sale as one or the other is a question of fact and evidence.

Sandy's v. Small.

The weak point in this case appears to me to be that as the spirit was only 30° U.P. the magistrate did not find that the water was added to fraudulently increase the bulk, weight, or measure or not; as he is bound to find by the exemption clauses of section 6. The notice hung up in the house was: "All spirits sold here are mixed," and to whether the price paid was a fair one or not, evidence does not appear to have been adduced. And as Judges only find on points directly raised, the judgment does not go to the root of the question. And as the judges find only on facts, etc., as stated in the case the dismissal by the magistrate was upheld.

Gage v. Elzey.

This case is to my mind stated better in that the sale was held from facts before them that the purchaser was not prejudiced, and hence the dismissal by the magistrate was upheld.

Morris v. Johnson.

In this case the magistrate failed to find that the addition of water to the spirit was fraudulent and the case was sent back for the magistrate to find on the point as to whether the purchaser knew of the dilution.

Norris v. Asker.

This case summarizes the foregoing very well, the invoice as stated and other points minutely detailed. A notice was stuck up in the house "All spirits sold here are diluted in accordance with the new excise regulations." Justices held the notice good, and dismissed the case.

The Judges held the magistrates were wrong and that the notice of itself was not a protection, and the justices should have found whether the purchaser was prejudiced.

Thus we find that it is the duty of the Bench to determine from the facts before them as to whether, even in the face of a notice, a purchaser is prejudiced and if the admixture is fraudulent.

Huggins v. Hall.

This case is one where coffee is the food bought, and no question of fraud is raised. The only question appears to have been one of notification. A half pound of coffee was bought from a tin labelled "Coffee and Chicory," it was sold as a mixture. It contained 30 per cent. of coffee. The conviction was for selling coffee not of the nature, substance and quality demanded. Sec 6. Fraudulent addition was not found.

The Court held that the Justices were wrong in convicting as the appellant was entitled to sell a mixture if she choose, and no offence within the above section was disclosed.

Jones v. Jones.

This case raised the question as to sufficiency of notice. The food in question being cocoa. The package was wrapped in an outer wrapper of opaque paper. On the label was printed a notice to the effect that the cocoa was mixed. Analysis shewed only 30 per cent. cocoa and 70 per cent. starch and sugar.

The weak part of this case seems to me to be that no evidence of real prejudice seems to have been given, i.e., fair and reasonable price, etc.

The Judges held, that a notice of admixture was sufficient, and there being no evidence of fraud the conviction was wrong.

Attfield v. Tyler.

A cocoa case—contained 40 per cent. of starch and sugar. The wrapper declared the cocoa to be mixed. But the type of the label was small.

The Justices did not find fraud, but they did find prejudice.

The Judges held the conviction to be wrong and allowed the appeal with costs.

NOTE.

Cocoa is scarcely ever sold pure, as it contains a great deal of fat which a great many people find disagreeable, 25 per cent. of the original fat should be left in the cocoa.

Jones v. Davies.

A tin of milk was bought for 4½d., the appellants attention was not called to the label: "This tin contains skimmed milk." It was found that 93 per cent. of the fat had been abstracted.

The only points for consideration were, (1) "Whether the label and disclosure as proved, the purchasers attention not being called thereto, was a sufficient disclosure under section 9." (2) "Whether the label was by itself a sufficient disclosure."

The Court do not appear to have decided upon point (2). But simply held that as to point (1) there was a sufficient disclosure.

*Platt v. Tyler.**Wright v. Tyler.*

A tin of milk was bought for which 3½d. was paid, the tin bore a label: "This tin contains skimmed milk, etc." The purchaser was also told of the label.

The Justices held as a fact that the label by its

position was not sufficiently conspicuous or legible, and that as for the most part it was called "Condensed Milk," and not "Condensed Skim Milk," the label was not distinctly printed or delivered with the article. The Justices convicted.

Held by the High Court that the Justices were wrong, and that the cases were concluded by Jones v. Davies, and that there was a sufficient compliance with the Act.

It appears to me that the Judges have applied the doctrine of "caveat emptor" here.

Otter v. Edgley.

Otter sold coffee with a label stating that it was mixed with chicory—it was proved to be 60 per cent. chicory and 40 per cent. coffee. The Justices found that as the precise quantities were not stated on the label, it must have been fraudulently added to increase the bulk.

The High Court declined to support the conviction.

NOTE.

In my view the Justices strained the evidence; there is no compulsion as to stating quantities on a label.

Liddiard v. Reece.

A half pound of coffee was bought. Before it was taken from the counter attention was called to a printed label on the package: "This is sold as a mixture of chicory and coffee."

A summons was issued and the seller was convicted for (1) having sold an article not of the nature, substance and quality of the article demanded, (2) because the price charged was the price of pure coffee, and hence the mixture appeared to be fraudulent, (3) and because the label was not brought to the purchasers attention until the purchase was complete.

On appeal the conviction was upheld because the magistrates had found as a fact the coffee was fraudulently mixed with intent to increase the bulk, and being so the mere fact of the notification and label did not protect the seller.

Horder v. Meddings.

An inspector went to the shop of the respondent and asked for half a pound of coffee. The servant in charge weighed half a pound from a tin marked "Symington's Coffee." The servant said it was 1s. 4d. per pound. The inspector said it was bought for analysis. Then the coffee was wrapped in paper marked: "This is sold as a mixture of chicory and coffee." The purchaser was informed that he could have coffee berries ground for him at a higher price. He refused. He saw the printed notice before paying for the article and also knew before the sale was completed that the article was mixed.

It proved on analysis to consist of 85 per cent. of chicory and 15 per cent. of coffee.

The magistrate dismissed the case.

On appeal the Judges held that the magistrate was bound—even in view of the label—to find whether the chicory was used in a fraudulent manner to increase the bulk, and if so, he ought to convict. Case sent back for finding of magistrate on facts before him.

Spiers and Pond v. Bennett.

In this case it was held that it is not necessary for the prosecution to prove "guilty knowledge" in order to obtain a conviction under section 6. And it is also doubtful as to whether the burden of proof of disclosure rests upon the accused person or the proof of non-disclosure rests upon the prosecution.

Milk was sold from which a portion of the fat had been unintentionally removed. A notice was exhibited stating that "all care was taken to supply the milk pure, and to supply it in proper condition, but they were unable to guarantee it as new, pure, or with all its cream, and (to meet the requirements of the Sale of Food, etc. Acts) did not sell it as such," was held to be sufficient disclosure of alteration.

Palmer v. Tyler.

In this case it was held—that if a seller informs a purchaser that spirits sold to him are diluted at the time

of sale so as to be more than the number of degrees under proof as per section 9 of Sale of Food, etc. Amendment Act, 1879, by so doing the sale cannot be said to be to the prejudice of the purchaser. And it is not imperative that he notify by a label.

Jones v. Thomas.

This case was noted during the hearing of *Palmer v. Tyler*. At the hearing before the Justices, defendant said he had put water into the spirit so as to reduce it to 42.5° Under Proof to increase the quantity. It was also proved a label was on view running, "Diluted. No alcoholic strength guaranteed."

The Justices held the notice to be a sufficient disclosure.

The Judge ordered the determination of the Bench to be reversed, and sent the case back, saying they *must* find whether the purchaser was prejudiced or no.

Petchey v. Taylor.

A tin of condensed milk was purchased, and affixed thereto was a label having printed upon it (*inter alia*): "This tin contains skimmed milk." It was proved that by skimming only 63 per cent. of the fat could be removed from the milk.

It was also proved by analysis that 97 per cent. of the fat had been removed from the milk in question.

The following cases were quoted: *Jones v. Davis*; *Platt v. Tyler*; and *Wright v. Tyler*.

It was pointed out for the appellant that in *Jones v. Davies* almost the same amount of fat had been removed.

But it was stated by the Judges that *no evidence of the manner in which the fat had been removed*, was given in *Jones v. Davies*, and the state of things as found in the present case could not have been brought about by skimming.

Appeal dismissed, the Court holding the disclosure was not sufficient.

CONCLUSION.

If my colleagues find as much pleasure in reading this paper as the writer has found in its compilation or composition, he will be well repaid.

All cases bearing upon notification are noted except "Margarine labels."

THE DEBATE ON THE SALE OF FOOD AND DRUGS BILL.

(Continued from page 381).

Mr. Samuel (Stockton) protested against the amendment as an ineffectual method of preventing the importation of good Danish butter.

The amendment was negatived.

Mr. Colville moved to omit "margarine cheese" from the articles as to which the restriction was provided, remarking that "skim milk" cheese and other kinds of cheese were not included.

The Solicitor-General declined to accept the amendment, and could find no reason for leaving the importation of this article unrestricted.

Sir C. Cameron (Glasgow, Bridgeton) hoped the amendment would be pressed as a protest against a vicious system of legislation which selected a few articles and proceeded to deal with them in a fragmentary manner. There should be a scientific standard and definition of cheese, without which legislation would only be advancing another step in the quagmire it entered when the Margarine Act was passed.

Mr. A. Cross could not understand how, in the interest of legislation for prevention of fraud by margarine filled cheese, the amendment could be supported.

The House divided—

For the amendment	19
Against	157

Majority against	138
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On the return of the Speaker, after the usual interval, Mr. Caldwell (Lanarkshire, Mid.) moved an amendment

to leave out the words "or impoverished" from the phrase "adulterated or impoverished butter." He contended that there was no such thing as impoverished butter. The word "impoverished" in the clause was evidently applied to imported articles, not to articles produced in this country. The word "adulterated" and its definition were quite sufficient to meet everything dealt with by the clause.

Mr. T. W. Russell said that members of the Grand Committee would remember how it was shown that there were methods of treating butter which could only be met by using the word "impoverished." The word "adulteration" was not sufficient.

Sir C. Cameron said he could not conceive what "impoverished" butter was. This was an important clause which might give rise to litigation as to the interpretation of the word "impoverished."

Mr. Kearley hoped that his hon friends would not raise these petty points, as the Bill was too important to be lost. Evidence was given before the Committee to show that butter could be impoverished.

The House divided, and the numbers were—			
For the amendment	24
Against	162

Majority against	138
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Sir W. Foster moved to add after the words "skimmed milk" on line 17 of Clause 1 the words "and not fit for infants."

The Solicitor-General pointed out that the amendment implied that the separated or skimmed milk was fit food for adults.

Sir W. Foster: It cannot hurt adults.

The Solicitor-General said if it could not hurt an adult it would not do him or her much good. The amendment was not a desirable one, for the reason that parents and guardians would very soon get to know that either "separated" or "skimmed" milk was not fit food for infants.

Mr. Dillon said separated milk was not fit food for infants, grown children, or adults; it was not fit food even for calves or pigs. In Ireland young stock as well as children were suffering from the consumption of the "separated" milk sent out from the creameries. It would be a misfortune if Parliament perpetuated an expression which did not really describe what the article was.

Mr. Long said that almost every member of the House was desirous of seeing a term adopted which would prevent the sale of "separated" milk under a name which, it was generally agreed, did not exactly describe the quality of the article so sold, and he promised, therefore, if the amendment were withdrawn, that between now and the Bill going into Committee in another place the Government would consider whether a form of words could not be found which would meet the wishes of the House. (Cheers.)

The amendment was then, by leave, withdrawn.

Mr. Long moved to include within the operation of Clause 1—"any adulterated or impoverished article of food to which Her Majesty may by Order in Council direct that this section shall be applied, unless the same be imported in packages or receptacles conspicuously marked with a name or description indicating that the article has been so treated." He said he moved the amendment in consequence of an undertaking he gave to the Standing Committee. It was there suggested that certain specified articles should be included in the clause, and he undertook to introduce words which would extend the clause without incurring the danger of using specific words. He thought it was desirable, however, that before any additional articles were included in the clause application should be made for the issue of an Order in Council, so that the Department would be, to a certain extent, checked in its proceedings by the Privy Council.

Sir C. Cameron moved to amend the amendment by omitting the words "to which Her Majesty may by Order in Council direct that this section shall be applied." His

object was, he explained, to secure that the Department, without having to go to the Privy Council, should have the power to order the Customs to stop any adulterated or impoverished article of food on the receipt of information that it was coming in. While the Order in Council was being obtained such cargoes might be distributed over the country.

Mr. Long hoped the House would not adopt the hon. baronet's suggestion, because it would make the clause absolutely imperative. In moving such an amendment the hon. baronet took a step which could hardly be reconciled with his expressed desire to see the Bill made efficient and effective.

Sir C. Cameron, rising to order, asked whether the right hon. gentleman was justified in imputing to him a want of desire that the Bill should be efficient and effective.

The Speaker said the right hon. gentleman was not out of order in imputing to an hon. member a desire to defeat the Bill.

Mr. Long said the hon. baronet had more than once expressed the opinion that the Bill was a mischievous Bill, and that he did not desire to see it on the Statute Book. However, if his remark caused the hon. baronet any pain he withdrew it and apologised. The hon. baronet's amendment would make the Bill inefficient, because it would throw upon the Board of Customs a duty they would not be able to perform.

Mr. Brice hoped his hon. friend would withdraw the amendment. It proposed a very considerable increase in the powers of the Executive Government, and that, he thought, was a conclusive argument against it.

Mr. Lough also hoped the amendment would be withdrawn. One great advantage of the system of Orders in Council was that by it traders would learn what articles were to be excluded.

The amendment to the amendment was, by leave, withdrawn.

The amendment was then agreed to.

Sir W. Foster moved an amendment the effect of which would be to transfer the duties of enforcing the Act in regard to adulteration to the Local Government Board from the Board of Agriculture, as in the Bill. He pointed out that for many years the Local Government Board had practically the administration of the Adulteration Acts, and if this Bill passed, as he hoped it would, that Board would have the opportunity, for the first time, of making those Acts a reality.

Mr. Long said it was not necessary for him to enter into an elaborate defence of his Department, or to make any comparison between the Local Government Board and the Board of Agriculture. The country, as far as he knew, had never expressed any opinion for or against either of the Boards in regard to the work of administration. The work could not be better done than it had been done by the Board of Agriculture. He instanced the purity of the imports of butter at the present time as a result of the action taken by the Board of Agriculture. As a matter of fact, the great majority of the articles to which this clause applied were articles which belonged to the administration of his Department, and with which they had already dealt successfully. (Hear, hear.)

Mr. J. Samuel hoped the hon. gentleman would go to a division. Hitherto the local authorities in the country had looked to the Local Government Board for the administration of the Food and Drugs Act, but when this Bill became law they would not know to which Board they should apply.

Mr. Strachey said the people who lived in the country districts were tired of the way in which the Local Government Board did their work in this connection, and would be very glad to see the Board of Agriculture take its place. (Hear, hear.)

Mr. Bryce said he had no greater affection for the Local Government Board than for the Board of Agriculture, but there were two reasons why he thought the former Board ought to conduct this work. The first was

that these proceedings would very much depend on what went on in the country and on what was discovered by the local authorities. The local authorities would have to set the central authority in motion, and they would naturally communicate with the Local Government Board. Therefore, it appeared to him that, in conformity with general principles of administration, the Local Government Board should take the place here and throughout the Bill of the Board of Agriculture. (Hear, hear.) His second reason was this: They had been told repeatedly that this Bill was founded on the desire to prevent fraud, and nothing else. The prevention of fraud was in the interest of the consumer, and by Clause 2 of the Bill the Local Government Board was made the protector of the consumer, and the Board of Agriculture the protector of the interests of agriculture. It was quite clear, therefore, that the Board of Agriculture was not concerned in this matter. (Hear, hear.)

The Solicitor-General pointed out that they were now dealing with the act of importing, an altogether earlier stage than that with which the local authorities had to do. Therefore the first reason given by the right hon. gentleman was a very bad one. (Hear, hear.) And the second was not much better, for the second section pointed out that the Board of Agriculture was to have power to deal with articles of agricultural produce, but that the Local Government Board should interfere in the case of articles not in the nature of agricultural produce.

Sir C. Cameron supported the amendment, urging that the Local Government Board should have co-ordinate authority with the Board of Agriculture.

Mr. Lough said they were settling the matter on a permanent basis for many years, and the Government might give more generous consideration to the amendment.

Dr. Clark said the Local Government Board had done its work admirably, and he did not see any reason for the change.

The House divided, and the figures were—

For the amendment	...	...	76
Against	...	...	197

Majority against ... 121

Mr. Strachey moved to add at the end of the clause the following proviso:—"But any milk, cream, or butter containing any preservative shall be imported or sold as preserved, stating the name of the preservative and the amount per gallon or per pound of such preservative." All the amendment would do, he said, was to let the general public know exactly what they were buying.

Mr. Long said that the present law could deal with injurious preservatives, and the amendment would only embarrass the trade. It was because there were some doubts as to whether preservatives were harmless or not that the Government had appointed a committee to ascertain whether the use of those preservatives was injurious. It was undesirable to propose legislation of a troublesome character which would not have any compensating advantage and which might seriously interfere with large businesses. If the result of the inquiry was to show that the use of preservatives or colouring matter was injurious the question would be dealt with.

The amendment was negatived without a division.

On Clause 2 (power for Local Government Board or Board of Agriculture to sample articles of food).

Sir W. Foster moved to omit certain words relating to the powers of the Board of Agriculture. The effect of his amendment was, he said, to keep the Local Government Board in the position which it had hitherto held as the authority which would go down to various parts of the country to look after the Administration of this Act. This clause did not relate simply to agricultural produce, but to articles of food and drugs generally, and it was therefore on all-fours with the old powers exercised by the Local Government Board, and not to be in the hands of the Board of Agriculture as well. He did not think it advisable that there should be two Government Depart-

ments interfering with the local authorities with regard to their administration of this Act. He submitted that the words in question, suggesting as they did motives for the action of the Board, were destructive of public confidence in an Act of Parliament. Every Act of Parliament ought to do its duty between every subject of the Realm.

The Solicitor General offered to meet the point raised by the hon. member by striking out certain of the words objected to so that the clause would then run that the Local Government Board or the Board of Agriculture may direct its officers to sample articles of food, etc.

Captain Sinclair desired to see the duties in question entrusted definitely to the Local Government Board, and not to both Boards.

Mr. J. Samuel thought the county councils would take great objection to a dual authority in this matter.

Mr. Bryce said their objections were not entirely removed by the concession of the Solicitor General, for the clause was to be considered in connection with Clause 3, and if the words, "Local Government Board or Board of Agriculture" were retained, they would have a large series of duties alternative between two Boards. There was no precedent for such duality.

The Solicitor General explained that his concession was contingent on the withdrawal of the amendment.

Mr. Long said the course taken by hon. gentlemen opposite was not likely to induce the Government to make concessions. As the Bill was introduced the authority for carrying out certain powers was the Board of Agriculture, and to meet the objections of hon. gentlemen opposite the Government assented to the insertion of the words "Local Government Board." Now they found that that concession was to be turned into a handle for the elimination of the authority which originally stood in the Bill. That was a most unreasonable demand. (Cheers.) The Government were prepared to stand by the Solicitor General's undertaking, but only on the understanding that it was accepted by hon. gentlemen opposite. If the House were to be asked to discuss the concession *plus* certain suggested additions, then the Government would prefer to stand by the terms of the Bill.

Mr. Lambert thought the Government would be well advised in striking out the words, whether the amendment was pressed or not. Great difficulty had been experienced in getting local authorities to carry out the provisions of similar Acts, and for his part he should prefer that the administration of the Bill should be in the hands of the Board of Agriculture.

Mr. Lough said in Clause 2 they were dealing with localities and not with ports of entry as in Clause 1, and in the operation of the clause it would be found impossible to exclude local authorities from administration. The best system of administration would be to delegate to the Local Government Board the duty of galvanising local authorities into life. Responsibility should lie with that Board to secure uniformity of action.

Mr. Hobhouse said experience of the Local Government Board did not justify the agricultural community in considering that Board a representative authority for their interests. One of the main objects of the Bill was to look after agricultural produce in the interest of consumer and producer. In the preceding section the Customs authorities were required to give information to the Board of Agriculture, and what would be the use of that if power to take action were withheld from the Board?

The House divided, and the numbers were—

For the amendment	...	...	68
Against	...	...	183

Majority against	115
------------------	-----	-----	-----

Mr. Long moved various drafting amendments, which were agreed to.

Mr. Strachey moved to omit sub-section (b) which provides "that the fee for analysis shall be payable to the analyst by the local authority of the place where the sample is secured." He urged that in cases where the

analysis was in favour of the local authority, the local authority should not be made to pay.

Mr. Long said the Government Department could not act at all unless they had *prima facie* reasons for believing that the local authority was in default, and in those circumstances the local authority ought to pay.

The amendment was negatived without a division.

On Clause 3 (power for Local Government Board or Board of Agriculture to act in default of local authority).

Mr. Long proposed certain drafting amendments, which were agreed to.

On Clause 4 (power for Board of Agriculture to make regulations as to analysis of milk, cream, butter, or cheese).

Sir C. Cameron moved to omit the clause, which, he said, made a fundamental change in the existing law. He pointed out that at present a person charged with an offence under the Food and Drugs Act was safeguarded by the fact that a court would decide whether the adulteration was or was not injurious to health, and until such decision the heavy penalties would not be inflicted. Under this clause, however, instead of expert evidence being taken, the right hon. gentleman on his own responsibility, undertook to declare what was injurious to health. He had no doubt this was aimed at preservatives of butter and milk, despite the fact that there was to be a committee to inquire into the subject of preservatives.

Mr. Long said they did not in this clause lay down what was injurious to health. They had felt that the difficulty in the way of carrying out the recommendation as to a committee of reference for the selection of standards was insuperable, but that it was very desirable that something should be done to obtain expert opinion on these questions. They had therefore adopted this clause as a sort of compromise. What they hoped to get established was a presumption of what was pure food, and, having got that, they hoped the result would be to bring together the Government analyst and the district analyst, and to provide them with the information of a definite character which they were entitled to have. By the help of this clause they hoped to simplify procedure and make it more efficient.

Sir W. Foster said the clause did not show in what way a presumption was to be obtained. It would make the confusion with regard to standards worse than ever.

The House divided, when the numbers were—

For the amendment	44
Against	141

Majority against	97
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The further consideration of the Bill was adjourned until Wednesday.

THIRD DAY'S PROCEEDINGS.

On the consideration of the Bill being resumed on Wednesday,

Mr. Long (Liverpool, West Derby) moved to insert in Clause 5 (extension of the Margarine Act of 1887 to margarine cheese) after "butter" the words—"and provided that all margarine cheese sold or dealt in otherwise than by retail shall either be enclosed in packages marked in accordance with the Margarine Act, 1887, as amended by this Act, or be itself conspicuously branded with the words 'margarine cheese.'"

This was agreed to.

Sir C. Cameron (Glasgow, Bridgeton) moved to leave out Clause 7 (provisions as to manufacturers of, and dealers in, margarine and margarine cheese), saying that he did so on the ground that it proposed to treat a perfectly legitimate manufacture in an altogether exceptional manner and to drive out an interest of great importance to the agriculture of the country. They could not impose the restrictions of the clause on the foreign competitors, and they did not propose to impose them on the home competitors in the butter trade. The effect would be to foster unfair competition as against the margarine manufactures, and to hamper, and probably to crush out, a very important and valuable industry.

Mr. Long said the hon. baronet seemed to think that this clause would expose margarine manufacturers to a sort of unfair and inquisitorial system of inspection. That was not the view of the Margarine Defence Association, who, in reference to a similar clause in the Bill of a session or two ago, wrote to the Local Government Board expressing their belief that registration would prove effective in the suppression of fraud. If it was to be assumed, as he thought it was, that margarine manufacturers would conduct their business in a legitimate and honest manner, they had nothing to fear from any inspection of the kind contemplated by this clause. If, on the other hand, they were carrying on practises which would bring them within the law, then he thought there was a great deal to be said for the view expressed so often by hon. gentlemen opposite and others, that they should not devote all their energies to detect fraud on the part of the retailers, but that they should, where it was possible, get at the wholesale dealer, who was described by one hon. member "as the great rogue" in the matter. There was every reason for the retention of the clause, which conferred useful powers on the Department.

Dr. Clark (Caithness) contended that the law at the present time was quite stringent enough. These restrictions were unnecessary, and were to be regarded as a sop to the farmers. No real reason had been advanced to justify these exceptional restrictions on margarine manufacturers.

Sir J. Leng (Dundee) said his chief objection to the clause was that, without any proved, or even alleged, necessity, they proposed to harass an important manufacture. There was a feeling on the part of manufacturers generally that the system of inspection was being carried to an unreasonable extent.

Mr. Bryce (Aberdeen) said that he doubted the expediency of this clause. The principle on which hitherto inspection had been conducted did not apply in this case. Neither public health nor public safety was at stake. The House should enter a protest against such legislation, which would have the effect of preventing competition.

The Solicitor General (Sir R. Finlay) said that inspection was permissible where it was needed for the public good. The manufacture of margarine was a legitimate industry, and it was not interfered with by the Bill; but much of the margarine was afterwards sold as butter, and it was right in the interests of the consumers to check such fraudulent practices.

Mr. Wallace (Perth) asked how the margarine imported from abroad was to be traced.

The Solicitor General said that provision was made in the first clause for such margarine to be clearly marked.

Mr. Wallace thought that the same principle should be applied to the margarine manufactured at home. He could not support this dangerous extension of the principle of inspection.

After some remarks from Sergt. Hemphill (Tyrone, N.),

Captain Sinclair said that a harrassing clause of this nature was open to the gravest objection. There was no end to its possible application.

Sir F. Powell (Wigan) asked whether the officer of the Board of Agriculture who made the inspection was to consider the information received as entirely confidential.

Mr. Long said that all information obtained through Government inspection was regarded as strictly confidential.

Mr. Steadman (Tower Hamlets, Stepney) denied that this was a measure of protection, and showed that it was the small shopkeeper who was harassed by inspection and not the large wholesale dealer, who generally escaped scot-free.

Mr. Abel Thomas (Carmarthenshire, E.) also failed to see any indication of protection in the clause, nor how the really honest trader could be harassed by it.

The House divided, and the numbers were—

For the clause	...	...	...	216
Against	...	...	...	61

Majority 155

Sir C. Cameron moved to leave out Clause 8, which

forbids the sale or importation of margarine containing more than 10 per cent. of butter fat. He said this was the most obnoxious clause in the Bill. It was a clause to rob the poor man of his butter. The poor law authorities and the Metropolitan Asylums Board had of late years invited tenders for margarine containing at least 20 per cent. of butter: and if this clause passed the inmates of all their institutions would be deprived of this luxury. No mixture was forbidden by law to be sold under its designation as a mixture, except a mixture of margarine and butter. The effect of the clause would be to prohibit the manufacture of margarine except with the poorest of milk; it would seriously limit the market for the sale of milk by farmers, and it would benefit chiefly the foreigner. The pretext for that unprecedented proposal was that analysts could not detect the sophistication of butter with margarine if the mixture of butter exceeded a certain amount. But, in fact, in Glasgow the city analyst had found that in practice he could detect any mixture of margarine and butter. The clause was so retrograde and useless that it was the most mischievous part of the Bill, and he hoped it would be opposed to the bitter end.

Mr. Long admitted that he disliked this form of legislation—(Opposition cheers)—quite as much as hon. members who opposed it. That was to say, he agreed that if at all possible the freest field should be given for the manufacture of any article, so long as it was pure and genuine and was sold for what it really was. But that was not the question he had to consider when deciding what should be the nature of this clause. There had been for a long time great dissatisfaction as to the frauds which were being committed in the sale of margarine for butter all over the country. That led to the appointment of a Select Committee, the greater part of whose inquiry was directed to this form of adulteration, and they recommended, not that there should be a limitation to, but that there should be an absolute prohibition of, the mixture of margarine with butter. The recommendation, however, proved impracticable. He then had to consider whether it was necessary that any limitation should be imposed on the manufacturers. The hon. baronet had told the House that this was an attempt to interfere with the food of the working man. (Hear, hear.) He would like to point out to the House that in regard to good margarine of a cheap character, varying in price from 5d. to 7d. a pound, no serious effects would result from the adoption of this clause as it stood. The House would find that in their evidence before the Committee great distributing firms asserted that there was no demand for mixtures, and if offered as such the consuming public would not buy them. The best technical and expert evidence he had been able to obtain in regard to the manufacture of margarine showed that the best margarine that could be made was made without any admixture of butter to the manufactured margarine, and contained only 3 or 4, or at the most 5 per cent. of butter fat. Therefore the argument that this clause would prevent the production of the best margarine was not confirmed by these authorities. He believed it was true that the authorities at workhouses and lunatic asylums entered into contracts for margarine with the conditions that it should contain 20 per cent. of butter fat. He had obtained the best information that he could get on this point, and it showed that the best, the most palatable, and the most nutritious margarine contained an amount of butter fat below the limit imposed by this clause. In that case it could not be said that they were forcing on the country an inferior article. He was satisfied that this limitation would not interfere with the production of the very best article that it was possible to offer to the public, that what was wrongly called the superior article would find no place in the markets of this country if it was not for the fact that it was sold as that which it was not, and that the imposition of a limit of this kind would check a system of fraud which had become a great public scandal. He therefore invited the House to retain this clause in the Bill.

(To be continued next week.)

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Food and Sanitation.

SATURDAY, AUGUST 19, 1899.

WATER AT SPIRIT PRICE.

At Little Bowden Petty Sessions, Inspector Matteson summoned Louisa Stean, innkeeper, of Marston Trussell, for selling whisky of deficient strength on June 12th. Prosecutor deposed to having been supplied with half-a-pint of whisky by defendant's daughter, for which he paid 1s. 4d. He divided it in the usual way, and the county analyst's report showed that the sample submitted to him was 28 under proof, 25 being the limit allowed by law. Defendant pleaded guilty, saying he was unable to account for the deficient strength. Fined £1 6s., including costs.

BORACIC ACID IN BUTTER.

At Birmingham, recently, the adjourned hearing took place of the summons against Samuel Allen, grocer, 17, Tower-street, Birmingham, for selling butter containing 112 grains per pound of boracic acid. The case was adjourned on the application of the defendant to allow him an opportunity of converting an invoice which he had received into a warranty. The butter was supplied by a local merchant, Hans Graff & Co., who had stamped upon the invoice "Guaranteed pure butter." There was no signature to it, and the magistrates held that as it stood it was useless. Mr. Lane, who appeared for the defendant, now said that since the last hearing he had seen Hans Graff and Co., who did not repudiate the invoice, but admitted that the stamp put upon it was that of the firm. The defendant said the stamp was on the invoice when he received it; and Mr. Lane said that Hans Graff admitted putting it on. Mr. Fisher, one of the magistrates, said that the guarantee appeared to have been put on by way of a stamp. The case was adjourned to enable someone to prove that the stamp was upon the invoice in proper order at the time of the delivery of the butter. The defendant now swore that the stamp was there when he received it; and Mr. Lane said he had satisfied himself that it was. They could not accept such evidence in general cases. There must be satisfactory proof of the guarantee. They believed the defendant had done his best, and had acted in good faith. They therefore accepted the invoice as a guarantee, and dismissed the case.

ADULTERATED COFFEE.

At Shrewsbury, on August 10th, Thomas Thornes, grocer, Tankerville-street, Cherry Orchard, was summoned for selling coffee adulterated with 10 per cent. of chicory which was not the article asked for. A lad named Frank Wallader, whose parents live at Coleham, stated that on the 19th June last, acting under instructions he received from Inspector Croxton, he went to defendant's shop and asked for half a pound of loose coffee and half-a-pound of butter. He paid 9d. for the coffee. Mr. Thornes served him and asked him whom the things were for, to which he replied "Mr. Jones." Mr. Croxton went into a shop and took the coffee and butter from him. He heard the defendant tell the inspector that he bought the coffee as pure coffee. Inspector Croxton said he instructed the boy to go to the shop for the butter and coffee, and when he was served went in. He took the coffee and told Mr. Thornes that he wanted it for the purpose of analysis. Mr. Thornes admitted that he had served the boy himself, and witness asked him if he would like to have a sample. The defendant said he would, and the coffee was divided into three parts, wrapped up and sealed, and one sample was handed to the defendant, who said he bought the coffee as pure from a tradesman of the town, and the butter he bought in the market. On June 20th Inspector Croxton sent one of the samples to Dr. Bostock Hill, of Birmingham, whose certificate showed that it contained 10 per cent. of chicory. On a later day the defendant told him he brought the coffee as pure from Mr. Rowlands, grocer, of Frankwell. The defendant, called, said he had been in business about six months, and had never bought chicory or mixed his coffee in any way. He ordered 4 lbs. of pure coffee from Mr. Rowlands, verbally, and produced his book to show that that and other coffee was supplied at 9d. per lb. Mr. Bowdler said there was no written warranty given when the coffee was supplied, but the book implied a warranty. The Clerk: Can you show that this specific coffee was supplied to Mr. Thornes as pure coffee? Mr. Bowdler said he could offer no other evidence than the book and what Mr. Thornes had said. If an entry in the book of May 20th had been "pure coffee," he believed the bench would have dismissed the case, but the word "pure" had been accidentally omitted. Mr. Cock said the bench did not consider that a warranty was proved, but it was the defendant's first offence, and he would be fined £2, including costs, only.

VINEGAR AND SULPHURIC ACID.

At Marlborough-street, on August 10th, William Morrell, of No. 37, Carnaby-street, Regent-street, was summoned before Mr. Fenwick by the Vestry of St. James's, Westminster, for selling on 3rd June, vinegar adulterated to the extent of one-part of sulphuric acid in each 910 parts of vinegar; Matilda Kelley, of 31, Broad-Street, Golden-square, was similarly summoned with respect to vinegar containing one-part of sulphuric acid in each 500 parts of vinegar; Fanny Finstein, of No. 6, Portland-street, Soho, was similarly summoned with respect to vinegar containing one-part of sulphuric acid in 580 parts of vinegar. Mr. Hitchins, solicitor, prosecuted on behalf of the vestry, and Mr. Grain, barrister, defended Morrell and Kelly. The summonses were before the Court some weeks ago, and, as a dispute arose, the hearing of them was adjourned, so that the vinegar complained of might be analysed at Somerset House, in order that comparisons might be made with the analysis submitted by Dr. James Edmunds, the public analyst of the district. The result of the analysis from Somerset House was now handed to the magistrate, and, after examining it, he said it was almost identical with that submitted by Dr. Edmunds. He complimented the doctor on the accuracy of his analysis. Dr. Edmunds: From the first I never had any doubt about it. Mr. Fenwick said he thought the prosecution had proved their case. Morrell and Kelley were fined £2, with £3 2s. costs, and Mrs. Finstein, who was a widow with a very small shop, 10s., with £1 1s. costs.

MARGARINE AT BUTTER PRICE.

At Southampton, on August 10th, Julia Ford, 5, Antelope Buildings, St. Mary's-road, was summoned under the Food and Drugs Act for selling margarine as butter on the 11th ult. The Town Clerk (Mr. R. R. Linthorne) appeared for the prosecution, and Mr. C. Lamport defended. Inspector Hibberd stated that on the day in question he went to defendant's shop and asked for half-a-pound of butter, and was served by defendant. He told her he was going to have it analysed, and divided it into three parts, one of which witness sent to the Public Analyst, who had certified that there was only 44 per cent. of butter fat. Mr. Lamport said he relied on the invoice given by the person from whom defendant purchased the butter, which stated that it was fresh butter. That was sufficient under the Margarine Act, and he asked for a dismissal of the summons. Mr. Linthorne, replying, urged that the proceedings were instituted under the Food and Drugs Act, which provided that an express warranty was necessary. Under these circumstances Mr. Lamport withdrew his argument, thinking the proceedings were being taken under the Margarine Act. The magistrates fined defendant 40s. and costs, but Mr. Dunsford added that the sympathy of the bench was with the defendant.

CONVICTION FOR BORACIC ACID IN MILK.

At Westminster, on August 11th, Williamson Bros., dairymen, of Palace-street, Buckingham Palace-road, and Mr. Probo Perrini, restaurant keeper, of 30, Wilton-road, S.W., were summoned for selling milk adulterated with boracic acid. In the first case in the proportion of 56 grains to the gallon, and in the second at the rate of 69 grains to the gallon. Mr. Courthorpe Munroe prosecuted for the St. George's, Hanover-square, Vestry, and Mr. J. D. Langton defended. His contention was that the preservative used came within the qualifying subsection of the Adulteration of Food Act as an ingredient not injurious to health added "because the same was required for the production or preparation as an article of commerce." Mr. Langton said that as recently as April last Sir James Vaughan decided against the vestry when they prosecuted a well-known dairy company for using boracic acid. Mr. Munroe said Sir James differed from all his colleagues, and there had been convictions before Mr. de Rutzen, Mr. Slade, and Mr.

Plowden. Mr. Sheil: What my colleagues have done will not influence me, because I do not know the facts. Mr. Cassal, public analyst for St. George's, said boracic would mask stale milk. It prevented decomposition, but it also delayed digestion, and was very injurious in some cases. Cross-examined by Mr. Langton, witness said that he was aware that other experts differed. In his opinion milk should be kept by cold storage, and the preservative was entirely unnecessary. Mr. Sheil did not think that any thing ought to be added to the milk. It could be carried from the country without boracic acid or any foreign addition if proper precautions were taken. Mr. Munroe said the defendants Williamson had been twice convicted of offences under the Act. Mr. Langton: Not for boracic acid. Mr. Sheil in the Williamsons' case imposed a fine of 40s., and eight guineas costs. In the case of Ferrini, who sold but a small quantity (purchased, it was said, from the other defendants), there was a fine of 40s. and two guineas costs. Mr. Munroe remarked that retailers who wished to protect themselves should insist on a warranty from the wholesale vendor.

THE DEBATE ON THE SALE OF FOOD AND DRUGS BILL.

(Continued from page 406).

Mr. Hedderwick considered that the reasons advanced by the right hon. gentleman in defence of this clause were unsatisfactory. For the first time in the history of food products they were treating butter as an adulterating article. They ought not to prohibit the making of as good an article as possible. He heartily supported the hon. baronet in his motion.

Sir J. Ferguson (Manchester, N.E.) read to the House a telegram he had received from the Manchester, Salford, and District Grocers' Association urging him "in the interest of commercial honesty" to vote for the adoption, or even the diminution, of the percentage of butter specified in Clause 8.

Mr. Abel Thomas, in supporting the motion, said what was wanted by a section of the public was something with a strong flavour of butter, which was also much cheaper than, but as good as, butter. It seemed to him that by this clause they were stopping the manufacture of something which might be extremely valuable in future. They were absolutely forbidding the manufacture of some article of diet which nobody could say was in any way an improper article. The clause was quite outside the Act itself, and would introduce a new kind of legislation altogether. (Cheers.)

Mr. Bartley (Islington, N.) said the Bill was not to teach the people what they ought to like, but to let them have what they pleased provided they were protected from buying what they did not want to buy. (Opposition cheers.) Why should they say that this margarine should only contain a certain quantity of butter? If anyone chose to have margarine containing 40 or 50 per cent. of butter why should he not be allowed to buy it provided he knew what he was buying? It was no part of the duty of the Government to settle how these things were to be made, and he hoped the right hon. gentleman would see his way to reconsider this matter. He should be obliged to vote against the clause.

Sir W. Foster said all they had to do in this Bill was to see that the public got an honest description of the article they paid for, and that the article was not injurious to health. The moment they went outside that principle they got into difficulties with reference to the administration of the law. The Bill was not drawn in the interest of the consumer; it was pervaded with another and what he might call a sinister purpose, it was "in the interest of agriculture," and evidence of this appeared in the clause which had for its object the limitation of the consumption of margarine in the interest of the producers of butter. The public who used margarine knew what they were

buying, and had it served to them labelled, and should be allowed to have what they required without let or hindrance. The present law was sufficient, for it prevented a dealer selling except under proper description; and Clause 3 of the Bill enforced the regulation all over the country. The clause would not be conducive to the well-being of the community, and though on superficial examination its tendency might seem to be to increase the consumption of butter, he did not believe it would actually have that effect. He should vote against the clause, on the ground that it was an unfair restriction on the production of a wholesome article of food which a section of the public required.

Colonel Denny (Kilmarnock Burghs) failed to see how the clause would give the consumer more protection against fraud than he had under the existing law. Among workmen in his constituency and in other parts of Scotland a strong opinion had been expressed, and the matter was important to them in reference to their co-operative trading societies, that the operation of the clause would be an unfair restriction on legitimate trade, and sharing that opinion he should vote against the clause.

Mr. Kearley (Devonport) said there was abundance of evidence given before the Select Committee by importers, merchants, and distributors that these mixtures were the root and foundation of dishonest trading. He had introduced to the right hon. gentleman a deputation, among whom were distributors representing a turnover to consumers to the amount of ten millions sterling annually, and their evidence was that there were two classes of buyers, those who bought margarine and those who bought butter. These mixtures were not being sold according to the Act. Margarine was palmed off as butter. In Glamorganshire and in Scotland the working-man paid money for butter and got a vile decoction. The law was not enforced, and these frauds continued. The point that impressed him most was that most of the great distributors did not sell these mixtures. People who wanted butter and margarine would only buy them at their proper price.

Sir J. Leng said his strongest objection to the clause was that it contained not only a new but a bad principle. It was the first time in the legislation of this country in which an attempt has been made to class as adulteration the mixture of a superior with an inferior article.

Mr. Lough also opposed the clause.

Mr. Balfour (Manchester, E.) made an appeal to the House. He quite recognised that this was an important matter, but surely it had been adequately discussed. If the House would come to a decision on this point and let them get Clause 8, he should then move to report progress.

After some remarks from Mr. Samuel,

The House divided, and there voted—

For the clause	166
Against	83

Majority	83
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Sir H. Campbell-Bannerman (Stirling Burghs) hoped the leader of the House would now report progress. A number of very important amendments to the clause itself still remained to be discussed.

Mr. Long said he did not know on what information the right hon. gentleman spoke; but, so far as the amendments on the paper were concerned, no special point remained except the amount of percentage. (Opposition cheers.) That did not amount to a large number of questions, as was suggested by the right hon. gentleman. —The debate was adjourned.

FOURTH DAY'S DISCUSSION.

On Thursday evening the House resumed consideration of this Bill as amended in Standing Committee.

Sir C. Cameron (Glasgow, Bridgeton), on behalf of Sir J. Leng, moved to amend Clause 8 by substituting 30 for 10 as the percentage of butter to be allowed in

margarine mixtures. The clause was a bad one, but since the House had decided to retain it, he made this proposal in order to bring it into consonance with commercial demands. Hundreds of tons of margarine mixture containing 20 per cent. of butter fat were annually distributed under contracts with boards of guardians, asylums boards, and others, and the purchasers would certainly not pay 16s. per cwt. more for the mixture unless the additional percentage of butter was appreciated. It was conceivable that within the next few years a still more palatable and wholesome compound might be produced, and invention should not be fettered by the limit in the Bill.

Mr. Long said that, beyond the reasons for the clause as a whole, the figure in the Bill of 10 per cent. was justified as a reasonable compromise between the demand on the one hand to limit the mixture to 5 per cent. and the proposal now made. It was a compromise based on the advice and opinion of expert knowledge. He set up no opinion of his own, and certainly his taste in margarine was untutored. There was a very large demand for genuine margarine, and this article of the best quality could be produced with 3 or 4 per cent. of butter fat; therefore this extension was not required to secure margarine of good quality. There was also a demand for genuine butter, and it was against the illegal mixture of the two with the intention to delude purchasers that the clause was directed. The supply of margarine at margarine price would not be interfered with. If the condition was to be a fair one, which could be easily worked up so that manufacturers might keep within the law, there must be a reasonable margin and then the law would not be oppressive. The limitation proposed would prevent fraudulent sale and make it not only possible but easy in every way for the manufacturer to produce the best article he could and put it on the market at the price he ought to obtain.

Mr. Kilbride supported the 10 per cent. limit, as there was much in the Bill which met with the approval of those who wanted to suppress fraud but not to interfere with the legitimate trade in margarine.

Mr. Lough (Islington, W.) urged that if 10 per cent. was to be rigidly adhered to some regard should be had to the effect of the Bill on contracts made by the London County Council and other public bodies, and which were still running, which allowed for 20 per cent. In any event a wider margin than that proposed should be allowed.

Mr. Jeffreys (Hants, Basingstoke) opposed the amendment.

Mr. Bryce (Aberdeen, S.) said the only question seemed to be this: Was the article to be sold a little better or a little worse—a little more or a little less butter? The most satisfactory way to settle the point would be to have a number of samples in the tearoom. (Laughter.)

After some further conversation,

The House divided, and there voted—

For the amendment	48
Against	131

Majority against	83
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On the return of the Speaker after the usual interval,

Mr. Bartley moved an amendment making it unlawful to manufacture, sell, or import margarine containing more than 10 per cent. of butter fat, every person breaking the law being guilty of an offence under the Margarine Act of 1877, "unless he shows to the satisfaction of the court before whom he is charged that he purchased the article in question as margarine, containing not more than 10 per cent. of butter-fat, and with a written warranty or invoice to that effect; that he had no reason to believe at the time when he sold it that the article was other than margarine containing not more than 10 per cent. of butter-fat; and that he sold it in the same state as when he purchased it; and in such case he shall be discharged from the prosecution, but shall be liable to pay the costs incurred by the

prosecutor unless he shall have given due notice to him that he will rely upon the above defence." Without such a provision, he submitted, small traders would be harassed in a most unreasonable manner.

The Solicitor-General (Sir R. Finlay) said the amendment would not provide for the ordinary case, but only for cases which would very rarely occur. The case they had to deal with was where the wholesale dealer had fraudulently sent to the tradesman as butter an article which was really a mixture of margarine and butter. If it could be shown that such cases as were contemplated under the clause would occur in practice, the Government would consider the point with a view to its being dealt with when the Bill reached another place, but at present he could not accept the amendment.

The amendment was negatived.

Mr. Caldwell (Lanark, Mid) moved to add to the clause, "Provided that nothing in this section shall apply to any margarine manufactured or imported in fulfilment of any contract made before the passing of this Act."

Mr. Long: Agreed. (Cheers and laughter.)

The amendment was agreed to.

Mr. Heywood-Johnstone (Sussex, Horsham) moved an amendment to provide that every tin of condensed, separated, or skimmed milk should bear the statement that such milk was not suited for the food of infants. He showed that this kind of milk was absolutely unsuited for the food of infants, and that many public health authorities were in favour of the amendment, which was also supported by the report of the Select Committee. His object was to put a stop to a large amount of infant mortality in the large towns, and he appealed to the right hon. gentleman in charge of the Bill to go a little further than he had already done in the interests of humanity.

Mr. Long said he was aware that a great deal of mischief was done by giving food of this kind to young children, and he would be very glad if the system could be checked. What was wanted was that there should be a proper description of the article sold, and if the label carrying that description was to be of any value, the inscription must be of the briefest kind in order that it might be clear. The tins in which this food was sold were very small, and there was very little room upon them for an description which would be legible, and if words of advice were added the proper description might be obscured. He was very much afraid that the knowledge his hon. friend sought to impart was already in the possession of most of the people who used this particular article. He hoped his hon. friend would not press the amendment.

Mr. Warner (Stafford, Lichfield) pointed out that the word "poison" was placed as a warning on the labels of certain medicines, and, as this so-called milk was poison to infant children, for it crippled them physically, he thought the fact ought to be pointed out in some way to those who purchased it.

Mr. Maddison (Sheffield, Brightside) said that the Minister of Agriculture, in stating that even if the words of the amendment were inserted on the labels of this article it would still be bought, had insinuated that the wives of working-men, who principally used the milk, intended to kill the children.

Mr. Long: I suggested nothing of the kind. That is a gross misinterpretation of my words. (Hear, hear.) What I said was that the people who buy this milk know it is not fit food for children, and that if they could afford a better food for their children they would not buy this milk. (Hear, hear.)

Mr. Maddison thought that the right hon. gentleman's explanation amounted to the same thing. (Cries of "No, no.")

Mr. Bartley said the House had made it a criminal offence to put more butter into margarine, thereby making it better margarine than before. (Hear, hear, and laughter.) Surely it would be logical to say that this separated milk should not be sold for children. He was anxious that this Bill should be passed in the interests of justice and fair-play, but if they were to have these

extraordinary anomalies it would be better not to have the Bill at all.

Mr. Strachey (Somerset, S.) said the lives of a large number of children had been lost owing to the fact that they had been fed on this stuff, which was merely chalk and water. He therefore supported the amendment.

Mr. Hobhouse (Somerset, E.) said he understood that on a previous occasion the right hon. gentleman gave an undertaking that he would consider this question, and many of them would be glad if that undertaking was repeated.

Mr. Long said he did say that he would do his best to find words which would convey the warning that they all desired to convey. Some of his hon. friends had told him that they did not despair of finding words which would convey the necessary information. If he was able to find suitable words himself, or his friends could suggest suitable words, he should be glad to propose them on behalf of the Government.

Sir H. Campbell-Bannerman said so long as the House was dealing with the clauses relating to margarine and butter he did not feel called upon to take part in the discussion, because he believed margarine and butter were excellent things, and if a man got one instead of the other he might be swindled, but he would not be ruined in health. Now, however, they were dealing with bad milk, which if given to children would have disastrous effects. He hoped the right hon. gentleman would not be pedantic about the words that should be used. All the galaxy of talent he had around him had apparently been brought into play in order to find words which would express the desired warning. His hon. friend below the gangway had some words on the paper, but they were supposed to be objectionable.

Mr. Long said the reason was that the labels were very small, and if in addition to the words describing the article they were to add a sentence of this kind the labels would be absolutely worthless.

Sir H. Campbell-Bannerman thought that even small labels would hold words enough to express all that they desired to express.

Mr. T. P. O'Connor (Liverpool, Scotland) said he would be quite satisfied if the label contained the words "unsuitable for infant children." All that this amendment committed the House to was the principle that the label should contain the warning that this milk was unsuitable for infants.

Mr. Kearley (Devonport) suggested that the words should be—"This milk should not be used as food for infants."

Mr. Bartley: May I suggest "Bad for babes?" (Laughter.)

Serjeant Hemphill (Tyrone, N.): Would the right hon. gentleman accept the word "infanticide"?

Mr. Heywood-Johnstone, being satisfied with the undertaking of the President of the Board of Agriculture, asked leave to withdraw the amendment.

Leave was refused, and the amendment was negatived.

Mr. Davitt moved to strike out Sub-section 2 of Clause 16, which gives the court power in certain cases to send a person guilty of an offence under the Sale of Food and Drugs Acts to prison for a period not exceeding three months. He contended that this was an outrageous and vindictive punishment, and expressed his intention of dividing the House upon the amendment. (Hear, hear.)

The Solicitor-General pointed out that this clause was not in the Bill as it originally stood, but was introduced in Committee in consequence of the strong feeling that was evinced that in the case of a third offence due to the personal act, default, or negligence of the person charged, there should be some power given to the court beyond that of inflicting a fine. The House would observe that the subsection was carefully guarded. Not only was it subject to the limitation he had pointed out, but the punishment of imprisonment did not necessarily follow. All that was given was power to inflict imprisonment if

the court should be of opinion that a fine would not meet the case.

Mr. T. P. O'Connor argued that, in addition to the fine, there was a large additional penalty inflicted on offenders of the publication of the conviction. Even with all the safeguards in the subsection it would give opportunities for vindictiveness, and went an unnecessary length in adding imprisonment. He hoped the section would be withdrawn.

Sir C. Cameron pointed out that adulteration injurious to health was already punishable by imprisonment under the Adulteration Act of 1875, and urged that it was not necessary to have any new penalties for that offence. Where a man was not personally responsible he should not be made criminally liable for the acts of others.

Mr. Stuart-Wortley (Sheffield, Hallam) opposed the amendment, and hoped the House would place on the Statute-book a clear indication on the part of the Legislature that in certain cases a court of summary jurisdiction could do something beyond imposing a fine, and deal with the rich tradesman who would rather pay £1000 than go to prison.

Mr. Lough (Islington, W.) deprecated going the extreme length proposed in the subsection.

General Goldsworthy (Hammersmith) supported the subsection. A magistrate ought to ask himself, "What is the use of inflicting a fine? The defendant simply snaps his fingers at it."

Mr. Robson (South Shields) pointed out that they were going to send a man who might have 100 transactions in a day or in an hour to prison for a third offence. Let them increase the fine if they liked, but he protested against inflicting the stigma of criminality on a careless man. The clause would, in his opinion, defeat its own purpose. (Cheers.) They would not get magistrates to inflict these extreme and altogether inappropriate penalties, but it would be a disgrace to that House if they put such a clause as this on the Statute-book at all. (Hear, hear.) It was not usual in this or any other country to make negligence a crime.

Mr. Grant Lawson (Yorks, N.R., Thirsk) reminded the hon. and learned member that negligence was already made a crime. Let a father or mother neglect their child, and see whether they did not fall under the Acts for the protection of children. (Cheers and Opposition cries of "Oh.") Let the child die, and the parents found themselves charged with manslaughter for their negligence. But the hon. and learned member seemed to have overlooked the subsection of the clause, which provided that this penalty was not to be imposed if the Court was of opinion that a fine would not meet the circumstances of the case (hear, hear), and he had great confidence in the way in which justice was administered in this country.

Mr. Pickersgill (Bethnal-green, S.W.) supported the amendment in the interests of the poor offender. A great deal of feeling had been excited on these questions, and there was reason to fear that prejudice might enter into the administration of the law. His attitude would be affected, however, by that of the Government in relation to the latter amendment giving an offender liable to imprisonment the right of trial by jury.

Mr. Long said the Government could not accept the amendment to which the hon. gentleman referred, because it would alter the general law. It was not the case that these proposals represented a new departure in legislation. There was more than one precedent for it. Even the ingenuity of the hon. and learned member could not draw a distinction between the section of an Act which gave to the Court the right to impose six months' imprisonment without the option of a fine where the offence was one for exposing and offering for sale articles unfit for food or fruit unfit for consumption. This clause not only gave the Court power without the option of a fine to impose imprisonment for six months for the sale of unsound meat or unsound fruit, but the London Public Health Act of 1891 stated that punishment might be inflicted for the first offence.

Mr. Robson: Does the right hon. gentleman suggest that there is no distinction between the case of exposing meat unfit for human consumption where the person charged knows it to be such and the offence under this Bill?

Mr. Long said that in the course of the past week there had been a notorious case mentioned in the newspapers, in which a defendant had been charged with this offence and in which he pleaded that he was not only not a party to the transaction but that one of his own officers brought the matter under the notice of the officer of health. In the phraseology of the clause there was every protection for the honest trader or for the unfortunate man charged without being personally negligent or guilty. The clause was inserted in the Grand Committee in consequence of the almost unanimous opinion expressed during the debate on the second reading.

Mr. Seely (Lincoln) said he should be glad if the Government could see their way to strike out the clause. He had no wish to defend in any way the large trader with 500 or 600 shops; he could take care of himself. But the House ought to consider the small and ignorant trader who often could not obtain good legal advice.

Mr. J. A. Pease (Northumberland, Tyneside) said the Government had made out no case for the insertion of the provision which had been made upstairs in Committee, and he had heard no evidence whatever to justify it.

Mr. Maddison said he intended to vote for the amendment. He asked whether the right hon. gentleman was prepared to extend this sort of legislation to the railway director who year after year kept the shunting yard dark, and so killed men, or to the slum landlords who for generations slowly but surely murdered people, thereby making a fortune. (Cheers.) He was against all vindictive legislation such as this.

Mr. Gedge (Walsall) hoped the Government would stand by the clause. They ought to legislate for rich and poor alike, and without the section objected to, a rich man would be able to escape with a fine, which to him would represent no punishment.

Mr. Duckworth (Lancashire, Middleton), who opposed the amendment, said the clause as it stood carried but one of the clearly defined objects of the Bill—the protection of the honest trader. Much had been said of the danger of a respectable man being convicted of a technical offence, but what about the man who had no character to lose? Without the clause as it stood in the Bill the really criminal section of the trading classes would escape punishment. To impose fines on that class of people had no effect whatever; they had no character to lose and they did not care for a mere fine.

Mr. Cawley (Lancashire, Prestwich) said the penalty under the clause could only be inflicted on the small shopkeeper. It would not be possible to convict large shopkeepers, and now that small retailers were being driven out of business by wealthy corporations it was hard that they should be subject to a punishment from which their wealthy rivals would be exempt.

The House divided, and the numbers were—

For the amendment	...	...	71
Against	...	...	188

Majority against ... 117

Sir C. Cameron then moved to amend subsection 2 by providing that a person guilty of an offence should be liable to imprisonment where the offence was committed by the personal act, default, or "culpable" negligence of the person accused. He said the addition of the word "culpable" would make the clause less stringent.

The amendment was agreed to.

Mr. Heywood-Johnstone moved to insert a new subsection (3), providing that, where a person convicted of an offence under the Sale of Food and Drugs Acts has been within twelve months previously convicted of another offence under those Acts, the Court may order that a notice of the facts be affixed to any premises occupied by that person, and that he do pay the cost of such affixing.

He said the Select Committee on the adulteration of foods and drugs had recommended that offenders should be required to publish at their own expense notice of their conviction.

The Solicitor-General hoped the House would come to the conclusion arrived at by the Grand Committee, that it was not desirable that this additional penalty should be imposed. The press advertised the fact of a conviction, and there was no necessity for entrusting any such power to the Court.

Mr. T. P. O'Connor said he had listened with surprise to the Solicitor-General. (Laughter.) Had not the public a right to demand that if a fraudulent dealer had defrauded them and been convicted they should be warned by a notice?

The amendment was negatived without a division.

INVOICE-WARRANTY PRINCIPLE DEFEATED.

On Clause 19 (provisions as to the use of warranties or invoice as defence),

Mr. Heywood-Johnstone moved to omit from the clause words inserted in the Grand Committee, which provided that an invoice should be deemed to be a warranty without the addition of express words of guarantee.

Mr. Long said the effect of this would be to bring the Bill back to the state in which it was when it passed the second reading. In the Grand Committee, however, the Bill was altered on an amendment moved by Mr. Webster, who was then a member of the House, and carried by a narrow majority of four. No part of the Bill had received so much attention outside as this Clause 19, and all the evidence that had reached him from various sources went to show that the change introduced into the Bill in Grand Committee, by which an invoice was given the legal force of a warranty, would be attended with very great danger from the point of view of the successful detection and prosecution of the defendant. He believed that the amendment of his hon. friend tended in the right direction, and that it would be wiser and safer to return to the original state of the Bill. The matter, however, would be left entirely open for the decision of the House, though he should without hesitation vote for the amendment.

Mr. Brynmor Jones said that, judging from the communications which reached him, there was a great body of opinion in favour of making, he would not say all invoices, but some kind of invoice equivalent to an expressed warranty.

Sir C. Cameron said the principle had been adopted in the Feeding Stuffs and Fertilisers Act, and it ought to be in operation under this Bill.

Mr. Bryce urged that the substance of the matter should not turn on the word "invoice." Words importing description or quality should be introduced. It was most desirable to strike if possible at the wholesale dealer.

The Solicitor-General said that since the matter was before the Grand Committee the Government had received a large volume of evidence from those most interested in the working of the Act, and who had the best opportunities of judging the probable effect of the alteration, that its adoption would strike a serious blow at the efficiency of the Act, and they ought to pause before they made themselves a party to it.

Mr. Radcliffe Cooke believed it would be very difficult for retailers dealing with wholesale houses on the ordinary terms to demand an express warranty. To upset the clause, however, would be practically to exempt the wholesale dealer from the consequences of his fraudulent act.

Mr. Burns (Battersea) trusted sincerely that the House would reverse the snatch decision of the Committee upstairs.

General Laurie (Pembroke and Haverfordwest) hoped the amendment would be carried.

After a few remarks from Mr. Humphreys-Owen (Montgomery), Mr. A. Cross, and Mr. Spicer (Monmouth Boroughs).

The House divided, when the numbers were—
For the amendment 119
Against 42

Majority 77

Mr. Bryce suggested that the leader of the House should now agree to adjourn the debate.

Mr. Balfour appealed to the House in its own interest to finish the Bill. (Hear, hear.)

After some discussion,

Sir C. Cameron moved the adjournment of the debate.

The House divided and there voted:—

For the adjournment 28
Against 113

Majority against 85

Mr. Radcliffe Cooke said it was not right that they should be asked to discuss important amendments at this time of the morning. (Cries of "Oh," and Opposition cheers.)

Sir C. Cameron moved a new subsection to the clause providing that, "where any article of food is sold in tins or bottles in which it has been packed by the manufacturer, a label affixed by the manufacturer or wholesale dealer to such tins or bottles setting forth the nature of their contents, or a circular or advertisement setting forth the nature of the contents of such tins or bottles, and distributed along with them by the manufacturer or wholesale dealer, shall, for the purposes of the Sale of Food and Drugs Acts, be held to constitute a warranty."

The Solicitor-General said the Government could not accept the amendment.

The House divided—

For the amendment 30
Against 107

Majority against 77

The further consideration of the Bill was then adjourned.

In the House of Commons on July 24th,

This Bill, as amended, was further considered.

Mr. Long (Liverpool, West Derby) moved an amendment in Clause 22, providing that "this Act shall apply to Scotland, with the substitution for the Local Government Board of the Local Government Board for Scotland."

The amendment was agreed to.

Mr. Long, in Clause 25 (definition of food) moved to omit the words "The definition of 'food' contained in section 2 of the Sale of Food and Drugs Act, 1875, is hereby repealed."

The amendment was agreed to.

Mr. Long moved the following schedule:—

ENACTMENTS REPEALED.

Session & Chapter.	Short Title.	Extent of Repeal.
38 and 39 Vic., c. 63	The Sale of Food and Drugs Act, 1875	In Section 2 the definition of the term "food." In Section 14 the words "offer to," and the words "proceed accordingly and shall." Section 15.
42 and 43 Vic., c. 30	The Sale of Food and Drugs Amendment Act, 1879	Section 10.
50 and 51 Vic., c. 29	The Margarine Act, 1887	In Section 6 the words "or with," and the words, "not less than a quarter of and inch square."
54 and 55 Vic., c. 46	The Post Office Act, 1821	Section 11.

The amendment was agreed to.

Mr. Long moved that the Bill be read a third time. He hoped that the House would allow this motion to be taken now, in view of the fact that the Bill had been discussed in detail.

Sir J. Leng (Dundee) wanted further time to consider the Bill in its final shape.

Mr. Strachey (Somerset, S.), protested against that portion of the Bill in which the invoice was no longer to serve as a warranty.

Mr. Channing (Northampton, E.), on a point of order, asked whether if objection was taken in such circumstances to the third reading of a Bill the motion ought to be pressed by the Government.

The Speaker.—It is a matter for the House to consider. If there is a strong feeling against proceeding with a Bill it is not usual to persist with the motion. At the same time there are many cases where the third reading has been taken even against some objection.

Mr. Strachey was sorry the Government would not give way on the point of allowing offenders under the Bill the right of being tried by jury, instead of by a bench of magistrates. Having regard to the fact that the magistrates were themselves interested in seeing that agricultural produce was properly protected, it might be suspected by some persons that they would not be strictly impartial in this particular class of cases.

Mr. Caldwell, stating that he knew there were members absent who wished to discuss the Bill on third reading, moved the adjournment of the debate.

Mr. Long said he had no desire to press this matter unfairly, but it would, he thought, be admitted that the Bill on second reading, before the Grand Committee, and again on the report stage, had received the most exhaustive and detailed consideration, and therefore nothing remained but to repeat over again the arguments already used against certain details of the measure. In these circumstances, and having regard to the fact that the opposition came from only a few hon. gentlemen opposite, he hoped the House would resist the amendment.

Mr. Bryce (Aberdeen, S.) suggested to the President of the Board of Agriculture that, as the third reading could not be taken except by general consent, he would be well advised not to press his motion. The Bill was a most important one and excited an interest out of doors altogether disproportionate to the present attendance of members.

Mr. Long, having regard to the expression of opinion on the part of the front Opposition bench, withdrew his opposition to the adjournment of the debate.

The debate was accordingly adjourned.

The adjourned Debate on the Third Reading of this Bill was resumed on July 25th.

Sir C. Cameron held that the measure contained an immense amount of that which was reactionary and bad, and that it belonged to a class of legislation known in America as "Grainger" legislation. He declared that, while the Bill was intended to protect the butter industry, it would benefit the foreign producer twice as much as the British farmer. Those who would reap most advantage from the measure in this country would be the lawyers, as it would render worse confounded the confusion which already existed with respect to the Adulteration Laws. One of the great blots on the Bill was that there was no attempt made to punish adulteration at the fountain head and to reach the wholesale dealer. (Hear, hear.)

Sir W. Foster agreed that the Bill had many defects, but there were advantages likely to accrue from its passage. They would in particular get better inspection than in the past of imports at the port of entry. The Bill would also do much in inducing local authorities to enforce their powers against adulteration. He hoped that before the Bill became law reconsideration would be given to the question of invoices as warranties. This was a point of great importance, to the small shopkeeper especially. There should be in every case full opportunity for a man

to clear himself by referring the authorities to the producer of the article. (Hear, hear.)

Sir J. Fergusson also attached importance to the question of the value of invoices as warranties.

Mr. Harwood thought that there was a distinct note of exaggeration running through the discussion and the Bill also. He did not believe that adulteration existed as much as alleged, or that purchasers were such great fools as not generally to know what they were buying.

Sir F. Powell felt that greater security was needed for the small shopkeeper, who could not, in the nature of things, get an analysis of everything he had on sale.

Mr. B. Jones considered that there should be greater protection provided in the Bill for innocent retail dealers.

Mr. H. Johnstone thought that some responsibility should rest on the retailer as well as the wholesale dealer. He congratulated the President of the Board of Agriculture on the admirable tact and temper he had shown in carrying through the Bill.

Mr. Lowles said that retailers had to take the word of the wholesale dealer; and therefore the invoice from the wholesale dealer should be their security.

Mr. Bryce was glad that his hon. friends did not intend to divide on the third reading of the Bill, because, although there were many points open to objection, the Bill contained Clauses of practical value, which would tend to detect and prevent fraud. It appeared to him that there would be greater security against fraud if they struck at the wholesale dealer rather than the retail dealer, and he joined in the appeal that when the Bill reached another place that point might be reconsidered. He objected to the Board of Agriculture being brought in as the Authority under the Bill, as it rather savoured of protection of agricultural interests. Such matters as this Bill dealt with should, as far as possible, be left to the local authorities, and the Local Government Board was more in touch with those authorities than the Board of Agriculture. He was afraid that confusion might result from the dual authority.

Mr. Long said he was glad to find that although criticisms had been addressed to parts of the Bill, on the whole it was recognised that it contained much that was good. With reference to the point whether the Local Government Board or the Board of Agriculture was the most suitable authority for the purposes of the Bill, he should point out that the responsibility for introducing the Board of Agriculture into this kind of Departmental work did not rest with the present Government. The first time it was so introduced was to deal with the adulteration of food in connection with dairy produce, and that was done by the Government of which the right hon. gentleman opposite (Mr. Bryce) was a member, and with the approval of the then Leader of the Opposition in that House (Sir W. Harcourt). This Bill only regularised and put upon a permanent footing work commenced by the last Administration; and he, therefore, thought they might hear less about Protection in connection with this Bill. The Government would act in the future as in the past, with no desire to bolster up home products, but solely with a desire to secure that competition should be fair and open, that a pure home article should compete with a pure article from abroad, and that it should not be depreciated by the introduction of an adulterated article, which ought to be sold as such, and not as something very different. He knew the effect of the Bill would be to increase the sale of margarine, but of margarine for what it was; and as to the power to sentence a person to imprisonment on a third offence, it was only by giving such a power that they could put the wealthy producer in the same position as the small producer or retailer, for the wealthy producer could otherwise treat the fines with contempt. They had made material changes in the Bill with regard to the wholesale dealer, and he proposed, on behalf of the Government, to move to insert in another place a Clause which would give power to take samples at the place of delivery. The penalty for giving a false warranty had been increased to £20, rising to £100 for the third offence with imprisonment.

The Government also proposed that in cases where a retailer was prosecuted for adulteration, and established that the responsibility rested with the wholesale dealer, the local authority should have power to institute proceedings against the latter at the place where the offence was committed. They also proposed to introduce into the Bill a provision throwing upon the giver a false warranty to a retailer the *onus probandi* of proving his innocence, instead of its being left to the tradesman not only to demonstrate his own innocence, but to prove the guilt of the wholesale dealer. He hoped before the Bill reached the Committee stage in another place to be able to find some words which would clear up any doubts which existed as to the legitimate use to be made of an invoice from the point of view of a warranty. In regard to the labelling of milk said to be unfit for the consumption of infants, he believed that medical opinion was divided on the question, but if he could find an accurate description which came within the limits of a label while it did not make the declaration that the milk was unfit, he should be willing in another place to make the necessary amendment. He was not aware of any practical difficulty in working the Bill.

The Bill was then read a third time.

(To be continued next week.)

THE FOOD PRESERVATIVES COMMITTEE.

The Committee appointed to inquire into the use of preservatives and colouring matter in food held its first meeting on July 17th, when there were present the right Honourable Sir Herbert Maxwell, Bart., M.P., F.R.S., in the chair, Dr. Timbrell Bulstrode, Dr. Tunncliffe, and Mr. C. J. Huddart (Secretary). The terms of reference to the Committee were under discussion, and certain preliminary matters disposed of, a second meeting being fixed for early in August, to complete arrangements for the carrying out during the hot weather of necessary experiments in relation with the use of preservatives and colouring matters in one and another class of food, and to settle the scope of the evidence to be taken when the Committee reassembles in October next.

The Departmental Committee on Preservatives and Colouring Matters in Food met again on August 5th, when there were present Sir Herbert Maxwell (Chairman), Dr. Timbrell Bulstrode, Dr. Tunncliffe, and Mr. Charles J. Huddart (Secretary). Applications from various associations to be heard by representatives in evidence were considered, and the general question of the scope of the evidence to be taken was under discussion and settled so far as is at present practicable. Experiments within the terms of reference to the committee have been set going in one and another direction.

THE TOXIC EFFECTS OF BORIC ACID.

DR. J. J. EVANS in the *British Medical Journal*, says, in treating a case of cystitis increasing doses of 10 to 20 grains of boric acid three times a day were prescribed. After about three weeks of this treatment an erythematous rash spreads over the patient's neck, face, and head, followed by subcutaneous oedema, and a fine scaly dermatitis. The salivary glands became enlarged, and eventually the hair on the face and head fell out, so that in about a fortnight the man was perfectly bald. The drug was discontinued, but six weeks elapsed before there was any reappearance of hair on the face or head. In numerous other cases of cystitis and urethritis extending over a period of five years, Dr. Evans has observed similar effects following the administration of boric acid—that is, an erythema followed by a fine scaly exfoliation. Immediate discontinuance of the drug prevented development of the more severe symptoms, but in one case in which it was inadvertently continued the hair fell out to a slight extent, and there was marked exfoliation of the skin, especially of the hands, with onychia and splitting of the nails. Dr. Evans concludes that the symptoms were entirely due to the action of boric acid on the skin and appendages.

THE KIND OF VINEGAR USED IN PICKLING.

A WRITER in the *British Baker* gives the following formulas for pickling vinegars:—

- 10 gal. malt vinegar.
- 9 gal. water.
- 1 gal. acetic acid.
- 5 oz. caramel colouring.

Mix together, and colour with the caramel.

- 37 gal. water.
- 2 gal. treacle.
- $\frac{1}{2}$ gal. yeast.
- $\frac{7}{8}$ lb. acetic acid.
- $\frac{1}{2}$ lb. caramel.

Put into a cask and stand away for two weeks, stirring at intervals, leaving out the bung. It will be fit to use in the time named and improves by keeping longer.

- 8 gal. water.
- 1 gal. acetic acid.
- 4 oz. caramel.
- 1 oz. acetic ether.

Add caramel and ether to acid, then pour the water over them.

Another vinegar may be made by diluting commercial acetic acid s.g. 1.060 with water until it has a gravity of 1.008, colouring with caramel, and adding a little of acetic or butyric ether to imitate the pungent aromatic odour of malt vinegar. Pyroligneous acid diluted with water is also used extensively as a cheap vinegar. Common vinegars are greatly improved by the addition of a small amount of tincture of roses; this is prepared by pouring spirit over a bottleful of rose leaves, straining after macerating one week.

BUTTER IS COLOURED TO FRAUDULENTLY DECEIVE.

THE reason why colouring matter is employed in order to impart a distinctive hue to butter says the *Farmers' Gazette*, is because there is a popular impression that butter which is white in colour never possesses such a pleasant flavour as that which is naturally of a deeper or richer tint. And there is certainly much in it, because no butter tastes so well as that produced by cows while on grass in summer, and no butter is so rich in colour as that so produced.

ADULTERATION IN CORNWALL.

MR. BENEDICT KITTO, public analyst for Cornwall, reports to the county council that among the substances analysed two samples of sweets and two of tea were of very low quality, but nothing injurious to health was found in the former, and they were therefore returned as genuine, and only coarse tea leaves with stems in the latter. The analyses of two out of the three samples of vinegar "showed them to have been made, as vinegar should be, from malted or a mixture of malted and unmalted grain," but the other was prepared from sugar. As similarly prepared vinegars have been held to be "genuine," this sample was not reported.

ALCOHOL FROM SAWDUST.

THE production of alcohol from sawdust on a manufacturing scale is receiving attention in Germany (*Drug Topics*). The sawdust is first treated with five-tenths per cent. sulphuric acid under a pressure of nine atmospheres, whereby it is changed into glucose. This is then fermented by neutralizing the acid fluid, adding yeast and a nutrient compound of magnesium and potassium sulphate, ammonium nitrate and calcium phosphate, and keeping at a temperature of 25° C. for two or three days. The alcohol thus formed is distilled and rectified. By this means 220 pounds of pine sawdust is made to yield thirteen to fifteen pints of absolute alcohol of superior quality. The sawdust residues are pressed into briquets and used as a fuel. The process bids fair to be an important commercial factor in the future.

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Food and Sanitation.

SATURDAY, AUGUST 26, 1899.

A CURIOUS MILK CASE.

At Spelthorne Petty Sessions, Henry Holdaway, of Evelyn Dairy, Grove-road, Teddington, was summoned for selling skim milk which only contained 7.95 per cent. of solids, not fat, whereas genuine skim milk should contain at least 9.0 per cent. of solids. Mr. G. W. Lay represented the defendant, and in reply to him Inspector Tyler said he had taken proceedings against those who supplied Mr. Holdaway with the milk. Evidence was given by the defendant's brother to prove that the milk had not been interfered with. The churn from which he took the milk at the station was unlocked. He swore he had put no

water in it. In reply to Mr. Lay, witness said no warranty was given with the milk. Mr. Lay admitted that there had been a technical offence, but submitted that payment of costs would meet the case of his client.—Before deciding the case the Bench heard a summons against the West Surrey Central Dairy Company, of Guildford, for selling to the prejudice of Henry Holdaway separated milk containing nine per cent. of added water and containing only 8.15 per cent. of solids, not fat, whereas it should have contained more per cent. Mr. G. H. White, of Guildford, represented the defendants. Mr. Tyler called a Twickenham porter to prove that the churn of milk consigned to Mr. Holdaway was received by him and untampered with. Mr. White explained that the milk came from Wincanton, Somerset, via Templecombe to Waterloo, and then to Teddington in open churns. In the first instance it was scalded, and the only way in which he could account for the excess of water was that it got in in the process of condensation. The only other explanation he could suggest was that it had been tampered with on the road. The railway company would not allow them to lock the churns. Mr. Buckmaster said no more water could condense than there was in milk. The Bench ordered Holdaway to pay 18s. 6d. costs, and fined the Dairy Company £5 and costs.

MARGARINE.

At Wednesbury on August 15th, Thomas Arch, Bloomfield Road, Princes End, was fined £1 11s., including costs, for exposing margarine for sale which was not labelled as required by the Act.

SWEET NITRE.

At the Barnsley West Riding Police Court on August 16th, a prosecution under the Food and Drugs Act occupied a considerable time. The defendant was Miriam Tomlinson, shopkeeper, Darfield, and she was charged at the instance of the local inspector of the County Council with having sold sweet nitre which was not of the quality demanded. Mr. Allan, county analyst, deposed that the sample sold by the defendant contained four-sevenths of the real nitrous ether, or three-sevenths less than the minimum of $1\frac{3}{4}$ per cent. prescribed by the British Pharmacopœia. The defence was that the drug when sold by the wholesale dealer was of proper strength, and the deficiency could not be avoided, the evaporation being caused by the frequent opening of the bottle. The Bench held the public had not got what was demanded, though there had been no adulteration. A fine of 10s. and costs was imposed.

HOW DAIRYMEN ARE VICTIMISED.

At North London on August 15th, Robert Roper, dairyman, of Howard-road, South Hornsey, was summoned for selling as pure milk an article to which the public analyst of Islington certified that 8 per cent. of water had been added. The defendant, being so positive that he had not tampered with the milk, submitted his sample to the Somerset House analyst, who certified "not less than 5 per cent. of added water." Dr. White, who appeared for the Vestry, said that in the face of this latter report there ought to be a conviction. Mr. Roper: I have a guarantee with the milk, of which this was a portion. It was fetched from the Finsbury-park Station, where it had come direct from the farm. I personally opened the churn and served it out to my man. Mr. Cluer: Very well. Fetch your warranty and the man from whom the sample was taken. The defendant: I may add that I have been in business for 29 years, have had hundreds of samples taken, and never been here before but once, and then it was proved that my man, and not I, was in fault. The warranty was produced and the man ("No. 17")

called. The latter swore that he did not tamper with the milk. Mr. Cluer said he could not believe that the defendant or his man had tampered with the milk. The blame lay with the farmer who supplied it. But as the defendant had not given the Vestry notice of the defence, he would have to pay costs of summons and analysis—12s. 6d.

At West Ham on August 16th, Frank Polley, a milk dealer, of Wilson-street, Plaistow, was summoned for selling milk adulterated with 5 per cent. of added water. Mr. F. George, for the defendant, said there was an agreement with Mr. J. R. Purle, of Great Warley, to supply "pure, new, and unskimmed" milk, and he called defendant, who said the milk when sampled was as it had come from Mr. Purle. Mr. Purle was also called, and said he sent the milk away pure as it came from the cow. Mr. Gillespie: Which cow? The one with the iron tail? Mr. Purle: The animal, your Worship. Mr. George: Your milk, some of it consigned to Mr. Polley, was sampled at Upminster Station and was found to contain six per cent. of added water. Are you surprised to hear that? Mr. Purle: I am surprised at it. Mr. George: The cows drink a lot of water? Mr. Purle: They do, especially this weather. Mr. Gillespie: But you would not expect it to filter right through into the milk? Mr. Purle: Oh, no, but the feed is so short and the milk is not so rich. Mr. F. George produced the agreement, but it was found not to be stamped, and Mr. Gillespie said it could only be put in as evidence on the usual terms, the payment of the stamp penalty. In the result, Mr. Gillespie said the warranty was not proved, and imposed a fine of 20s. and 35s. costs.—Laing Johnston, Junction-street, Plaistow, was summoned for selling milk containing 8 per cent. of added water. The defendant pleaded guilty. He said he bought the milk from Polley, the defendant in the last case, and sold it as received. When it was sampled he spoke to the inspector, and as a result a sample of Mr. Polley's milk was taken and was found adulterated. Here a fine of 20s. and 17s. 6d. costs was imposed.—For similar offences Daniel C. Jones, of Prince Regent's-lane, Custom House, was fined £5 and 17s. 6d. costs (adulterated 11 per cent. of added water); Thomas A. Hall, of Henniker-road, Stratford New Town, was fined 30s. and 19s. costs (adulteration 10 per cent.); David W. Davis, of Forest-gate, Stratford, was fined 20s. and 19s. 6d. costs (adulteration 5 per cent.). In each of these cases, defendants said they sold the milk as received from the wholesale dealer.

ADULTERATED COFFEE.

At Shrewsbury, on August 17th, Thomas Ecob, recently a grocer in High-street, was charged with selling coffee adulterated with fifty per cent. of chicory. Mr. J. C. H. Bowdler defended. On July 21st a lad named Wallader was sent by Inspector Croyton to the defendant's shop for half-a-pound of coffee. An assistant named Thomas Joseph Potter served him, and asked him whether he would have that at 8d. or 10d., and the boy said he would have that at 8d. the half-pound. The coffee was supplied, but the wrapper was previously stamped very indistinctly with an india-rubber stamp that the contents were "a mixture." The inspector then went into the shop and told Potter what the coffee had been purchased for and he replied that the boy was told that the coffee at 8d. was a mixture, and that at 10d. pure. A sample of the coffee had since been sent to Dr. Bostock Hill, of Birmingham, who certified that it contained fifty per cent. of chicory. Mr. Bowdler, for the defence, said the paper was stamped, as stated, with a stamp kept for that purpose. It was true the letters were not very legible; but the very fact of the stamp being used at all showed that there was no intention to defraud. The Bench considered the case a bad one, and that the proportion of chicory was excessive even if a mixture had been asked for. A fine of £5 and costs was inflicted.

SEIDLITZ POWDERS.

On August 10th, several cases against wholesale dealers were heard at the Brentford Police-court, arising out of a case in which Harriet Upton, a shopkeeper of Devonshire-road, Chiswick, was fined £5 for selling seidlitz powders deficient in tartaric acid and sodium bicarbonate. Messrs. Edward Cocks, of Clapham Junction, were summoned for having supplied Mrs. Upton with packets of powders bearing false labels and not prepared according to the British Pharmacopœia. Mr. C. Robinson represented Mrs. Upton, and Mr. G. W. Lay defended. Mr. Walter Tyler, the Inspector of Foods and Drugs, conducted the prosecution. Mrs. Upton said she purchased some seidlitz powders from a traveller named Watson. She sold them to the public in exactly the same condition as she had received them. James Watson, of Shepherd's Bush, said Mrs. Upton said she was out of seidlitz powders, and asked if he had any. He left her some, but did not receive any money. Mr. Tyler pointed out that on the label the words "British Pharmacopœia" were wilfully mis-spelt. Mr. Lay: You must summons the printer for mis-spelling. Proceeding, Mr. Lay said the summons was for selling the powders on July 4th last, whereas the sale took place nine months ago. He submitted that on that ground alone the proceedings must fail, as Mr. Tyler had been too late in taking out the summonses. Mr. Tyler said he could not take the summonses out before the proceedings against Mrs. Upton had been concluded. The matter was an important one for little traders. The magistrates dismissed the case. Mr. Bienes, of the "Drug and Sundries Company," was similarly summoned, but one of the witnesses for the prosecution stated that he sold the powders to Mrs. Upton on his own account, and had nothing whatever to do with the present defendant. The magistrates dismissed the case, and allowed one guinea as costs.

A MANCHESTER SELF-RAISING FLOUR.

Somerset House declares it free from Alum.

At the Manchester County Police Court on Thursday, before the Stipendiary magistrate (Mr. J. M. Yates, Q.C.), and other justices, the case of the Police v. Annie Moffit was mentioned. The defendant, who carries on business as a grocer and provision dealer in Tamworth-road, Stretford, was summoned for selling one pound of flour which contained, it was alleged, ingredients injurious to health on the 31st of May last. When the case was before the court on the last occasion it was stated that the summons was taken out under section 3 of the Food and Drugs Act, 1875. On the date in question Inspector Jones, of the County Police, visited the defendant's shop and asked for a pound of self-raising flour, and it was supplied to him on payment of twopence. A sample of the flour was sent to the county analyst at Liverpool, who certified that the flour contained 170 grains of alum, 140 grains of bicarbonate of soda, and 65½ grains of salt per pound of wheat flour. The public analyst in his observations also said, "No change has taken place in the constitution of the sample that would interfere with the analysis. Alum is an astringent drug of which the maximum dose is ten grains. In food it is injurious to health, whether mixed with bicarbonate of soda or not. The quantity present in this sample is excessively large, but its use in self-raising flour is quite unnecessary and very unusual." In accordance with the request of the defendant the case was adjourned *sine die* in order that a sample of the flour should be sent to Somerset House for analysis. The result of this analysis was read by Mr. Yates on Friday, and it showed that the sample was free from alum. Mr. Chapman, who prosecuted, and Mr. Chorlton, who defended, agreed that the case should be tried in a few weeks.

MAIZE IN FLOUR.

A GROCER named Arthur Bleck, of Mornington-road, Smethwick, was summoned for selling flour not of the nature and quality demanded, being adulterated with 10

per cent. of maize-flour. Mr. Van Tromp, the Inspector under the Food and Drugs Act, prosecuted. It was urged in defence that as the purchaser did not ask for "wheaten flour," but simply "flour," she secured what she asked for and could see from the label that it was pastry flour. The Bench fined defendant £1 14s. including costs. Henry Ransell, grocer, of Middlemore-road, Smethwick, was fined a like amount for a similar offence.

A HARD CASE.

THE Bridlington magistrates are no doubt as anxious as we are to check the wholesale adulteration of food that takes place around us; but to judge from a case that has come under our notice, says the *New Age*, it would seem that this anxiety of the Bench had overridden all reasonable notions of equity. Certainly some change in the law is desirable in the interests of shop assistants. The particulars of the case are as follows:—"An apprentice lad sells to the police 4 ozs. milk of sulphur—his master's goods, and to sell being part of the said apprentice's duty. Said article being found not up to the proper standard—the employer's oversight or fault—the lad is summoned and fined £5 and costs, or alternative two months' imprisonment. This is the lad's only offence; he had no means to pay and no parents to assist him. He appeals to the magistrates and to the Home Secretary for some mitigation of this severe penalty, but they are inexorable, and had not the fine been paid by a friend the youth must have gone to prison for two months and been branded with a stigma for the rest of his days through no fault of his own.

TYPHOID FEVER CAUSED BY MILK.

At the last meeting of the Gainsborough Urban Council, the Medical Officer presented his first report since the adoption of the Notification Act. Eleven certificates had been received—viz., one of diphtheria, six of typhoid fever, and four of scarlet fever. Two cases of typhoid were traceable to an infected milk supply. Typhoid fever was reported at the house of a milk seller, and since then three cases had been notified, and in two of them milk from the dairy in question had been used.

THE DEBATE ON THE SALE OF FOOD AND DRUGS BILL.

(Continued from page 406).

In the House of Lords, on August 1st, Viscount Cross, in moving the second reading of this Bill, said the sale of food and drugs was regulated by the Act of 1875, and the sale of margarine by the Act of 1887. But, owing to many complaints that a good deal of adulteration was being carried on despite these Acts, the matter was referred for inquiry in 1892 to a Select Committee, which sat for three years. What was required was not so much a great alteration in the law as an improvement in the administration of the law. The powers which at present existed for the administration of the law should be enforced on the local authorities, so that the law should be strictly carried out in future. It was quite clear, as had been shown by the figures which were quoted by the President of the Local Government Board, that where repression was vigorous adulteration decreased. He hoped the House would not think that this Bill was brought in simply to enact the agricultural part; quite the contrary was the case. The President of the Local Government Board had been approached from Manchester by the Chamber of Commerce, from Liverpool by the Association of Grocers, and from the metropolis by the Butter Association, clearly showing that it was the wish of those great bodies, which had nothing to do with agriculture, that the adulteration of food should be diminished as far as possible. Briefly, the principles of the Bill were that there should be

no interference with legitimate industry, or with wholesome or valuable articles of food, but that, on the other hand, the law must be put in force and obeyed, and the trades conducted on honourable and honest principles. He explained the various provisions of the Bill. Touching on Clause 8, which provides that it shall be unlawful to manufacture margarine which contains more than 10 per cent. of butter, he said this matter was very carefully considered by the Select Committee, whose report showed that a vast amount of fraud was perpetrated owing to the admixture of butter with margarine, which greatly facilitated the substitution of an adulterated for a genuine article. Since cream-separators had come into general use much of the milk sold was not nutritious, and it was cruel to allow poor people to purchase it for their children, whose health suffered from lack of nourishment. The Bill provided that every receptacle containing condensed, separated, or skimmed milk must bear a label inscribed "separated milk" or "skimmed milk," and in Committee he would ask their lordships to insert the word "machine" before "skimmed." Other provisions he alluded to, but they did not require lengthened discussion at the present stage. He moved that the Bill be read a second time.

The Earl of Kimberley said he had nothing to urge against the object of the Bill, and it was highly desirable that legislation against adulteration should be effective, but Clause 8 called for observation. That clause made it penal to put more than 10 per cent. of butter into margarine, and the arguments of the noble viscount did not satisfy him upon this provision. Margarine, so far as he could understand, was a cheap and wholesome article of food, the consumption of which ought to be encouraged, though, of course, the fraudulent sale of it as butter should be prevented. To add butter to margarine could not be called adulteration, and he could not understand why there was a departure from the usual principles adopted in these Bills for allowing mixtures, provided such mixture was labelled and sold for what it really was, as was the case with chicory and coffee. There was a prejudice against margarine, and no doubt it was largely bought by consumers as a substitute for butter, but a provision to promote the sale of one product instead of another, both being wholesome, was indefensible in a Bill of this kind.

Viscount Cross said the clause represented the unanimous opinion of the Committee. He had admitted that margarine was wholesome, but the clause was directed against the sale of mixture as butter.

The Bill was read a second time.

On August 2nd, the House of Lords went into Committee on the Bill, the Earl of Morley in the chair.

On Clause 1,

Viscount Cross moved to leave out the word "separated" on line seventeen, and to substitute "machine-skimmed" as the words to be printed on all receptacles containing condensed separated or skimmed milk.

The amendment was agreed to, and the clause added to the Bill.

Clauses 2 to 7 were agreed to.

On Clause 8, which restricts the amount of butter-fat in margarine to 10 per cent.

Earl Spencer said he did not understand exactly what the clause intended to do. The Bill did not prohibit the manufacture of margarine, but that clause prevented its improvement, although that could be materially done, and a large and growing industry depended on it.

Viscount Cross said the object of the clause was to prevent fraud, which, despite the Margarine Act of 1887, was carried on to such an extent that one of the witnesses before the Select Committee stated that 75 per cent. of what was known as margarine was sold with a slight mixture of butter as butter and obtained better prices.

The Earl of Kimberley thought the clause would not

prevent fraud. What it would prevent was the preparation of a better article of margarine which could be sold as mixed margarine and butter. He did not see why a mixed article of margarine and butter should not be allowed to be made and sold for what it really was, just as various other mixed articles were made and sold for what they really were.

Viscount Cross said the Select Committee which had sat for three years came unanimously to the conclusion that any such mixture, liable as it was to the promotion of fraud, should be prohibited.

The clause was agreed to.

Viscount Cross moved the following new clauses:—
“The provisions of Section 3 and Section 4 of the Sale of Food and Drugs Act Amendment, 1897 (relating to the taking of samples of milk in course of delivery), shall apply to every other article of food; provided that no samples shall be taken under this section except upon the request or with the consent of the purchaser or consignee.”

The clause was agreed to.

On Clause 19 (provisions as to the use of warranty of the invoice as defence, and proceedings against the warrantor).

Viscount Cross moved the insertion of the following new sub-section:—(6) Every person who, in respect of an article of food or drug sold by him as principal or agent, gives to the purchaser a false warranty in writing, shall be liable, on summary conviction, for the first offence to a fine not exceeding £20, for the second offence to a fine not exceeding £50, and for any subsequent offence to a fine not exceeding £100, unless he proves to the satisfaction of the court that when he gave the warranty he had reason to believe that the statements or descriptions contained therein were true.”

The amendment was agreed to.

The other clause was agreed to, and the Bill was reported with amendments to the House.

On Aug. 3rd, the report of amendments was received, and the Bill was read a third time and passed.

THE ENACTMENTS REPEALED IN THE FOOD AND DRUGS ACT.

IN the proceedings on the Food Bill in the House of Commons a new schedule was added to the Bill on the motion of Mr. Long, repealing certain passages in previous Food Acts. The following are the sections mentioned in the schedule of “Enactments Repealed,” the words italicised being those declared to be now repealed:—

Sale of Food and Drugs Act, 1875—

2. The term “food” shall include every article used for food or drink by man, other than drugs or water.

14. The person purchasing any article with the intention of submitting the same to analysis, shall, after the purchase shall have been completed, forthwith notify to the seller or his agent selling the article his intention to have the same analysed by the public analyst, and shall offer to divide the article into three parts to be then and there separated, and each part to be marked and sealed or fastened up in such manner as its nature will permit, and shall, if required to do so, proceed accordingly, and shall deliver one of the parts to the seller or his agent. He shall afterwards retain one of the said parts for future comparison, and submit the third part, if he deems it right to have the article analysed, to the analyst.

15. If the seller or his agent do not accept the offer of the purchaser to divide the article purchased in his presence, the analyst receiving the article for analysis shall divide the same into two parts, and shall seal or fasten up one of those parts, and shall cause it to be delivered, either upon receipt of the sample or when he supplies his certificate to the purchaser, who shall retain the same for production in case proceedings shall afterwards be taken in the matter.

Sale of Food and Drugs Act Amendment Act, 1879:—

10. In all prosecutions under the principal Act, and notwithstanding the provisions of Section 20 of the said Act, the summons to appear before the magistrate shall be served upon the person charged with violating the provisions of the said Act within a reasonable time, and in the case of a perishable article not exceeding twenty-eight days from the time of the purchase from such person for test purposes of the food or drug, for the sale of which in contravention to the terms of the principal Act the seller is rendered liable to prosecution; particulars of the offence or offences against the said Act of which the seller is accused, and also the name of the prosecutor, shall be stated on the summons, and the summons shall not be made returnable in a less time than seven days from the day it is served upon the person summoned.

Margarine Act, 1887—

6. Every person dealing in margarine in the manner described in the preceding section shall conform to the following regulations:—Every package, whether opened or closed, and containing margarine, shall be branded or durably marked “margarine” on the top, bottom, and sides, in printed capital letters, not less than three-quarters of an inch square; and if such margarine be exposed for sale, by retail, there shall be attached to each parcel thereof so exposed, and in such manner as to be clearly visible to the purchaser, a label marked in printed capital letters not less than one and a half inches square, “margarine”; and every person selling margarine by retail, save in a package duly branded or durably marked as aforesaid, shall in every case deliver the same to the purchaser in or with a paper wrapper, on which shall be printed in capital letters, not less than a quarter of an inch square, “margarine.”

THE TEXT OF THE SALE OF FOOD AND DRUGS ACT, 1899.

THE following is the full text of this Act as passed into law:

AN ACT TO AMEND THE LAW RELATING TO THE SALE OF FOOD AND DRUGS (August 9th, 1899).

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1.—(1) If there is imported into the United Kingdom any of the following articles, namely:—

(a) margarine or margarine-cheese except in packages conspicuously marked “Margarine” or “Margarine-cheese,” as the case may require; or

(b) adulterated or impoverished butter (other than margarine) or adulterated or impoverished milk or cream, except in packages or cans conspicuously marked with a name or description indicating that the butter or milk or cream has been so treated; or

(c) condensed separated or skimmed milk, except in tins or other receptacles which bear a label whereon the words “Machine-skimmed milk” or “Skimmed milk,” as the case may require, are printed in large and legible type; or

(d) any adulterated or impoverished article of food to which Her Majesty may by Order in Council direct that this section shall be applied, unless the same be imported in packages or receptacles conspicuously marked with a name or description indicating that the article has been so treated;

the importer shall be liable, on summary conviction, for the first offence to a fine not exceeding twenty pounds, for the second offence to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds.

(2) The word “importer” shall include any person who, whether as owner, consignor, or consignee, agent, or broker, is in possession of, or in anywise entitled to the custody or control of, the article: prosecutions for offences under this section shall be undertaken by the Commissioners of Customs; and subject to the provisions of this Act this section shall have effect as if it were part of Customs Consolidation Act, 1876.

(3) The Commissioners of Customs shall, in accordance with directions given by the Treasury after consultation with the Board of Agriculture, take such samples of consignments of imported articles of food as may be necessary for the enforcement of the foregoing provisions of this section.

(4) Where the Commissioners of Customs take a sample of any consignment in pursuance of such directions they shall divide it into not less than three parts, and send one part to the importer and one part to the principal chemist of the Government laboratories, and retain one part.

(5) In any proceeding under this section the certificate of the principal chemist of the result of the analysis shall be sufficient evidence of the facts therein stated, unless the defendant require that the person who made the analysis be called as a witness.

(6) If, in any case, the Commissioners of Customs are of opinion that an offence against this section has been committed, they shall communicate to the Board of Agriculture for their information the name of the importer and such other facts as they possess or may obtain as to the destination of the consignment.

(7) For the purpose of this section an article of food shall be deemed to be adulterated or impoverished if it has been mixed with any other substance, or if any part of it has been abstracted so as in either case to affect injuriously its quality, substance, or nature.

Provided that an article of food shall not be deemed to be adulterated by reason only of the addition of any preservative or colouring matter of such a nature and in such quantity as not to render the article injurious to health.

2.—(1) The Local Government Board may, in relation to any matter appearing to that Board to affect the general interest of the consumer, and the Board of Agriculture may, in relation to any matter appearing to that Board to affect the general interests of agriculture in the United Kingdom direct an officer of the Board to procure for analysis samples of any article of food, and thereupon the officer shall have all the powers of procuring samples conferred by the Sale of Food and Drugs Acts, and those Acts shall apply as if the officer were an officer authorised to procure samples under the Sale of Food and Drugs Act, 1875, except that—

(a) the officer procuring the sample shall divide the same into four parts, and shall deal with three of such parts in the manner directed by Section 14 of the Sale of Food and Drugs Act, 1875, as amended by this Act, and shall send the fourth part to the Board, and

(b) the fee for analysis shall be payable to the analyst by the local authority of the place where the sample is procured.

(2) The Board shall communicate the result of the analysis of any such sample to the local authority, and thereupon there shall be the like duty and power on the part of the local authority to cause proceedings to be taken as if the local authority had caused the analysis to be made.

3.—(1) It shall be the duty of every local authority entrusted with the execution of the laws relating to the sale of food and drugs to appoint a public analyst, and put in force from time to time, as occasion may arise, the powers with which they are invested, so as to provide proper securities for the sale of food and drugs in a pure and genuine condition, and in particular to direct their officers to take samples for analysis.

(2) If the Local Government Board or Board of Agriculture, after communication with a local authority, are of opinion that the local authority have failed to execute or enforce any of the provisions of the Sale of Food and Drugs Acts in relation to any article of food, and that their failure affects the general interest of the consumer or the general interests of agriculture in the United Kingdom, as the case may be, the Board concerned may, by order, empower an officer of the Board to execute

and enforce those provisions or to procure the execution and enforcement thereof in relation to any article of food mentioned in the order.

(3) The expenses incurred by the Board or their officer under any such order shall be treated as expenses incurred by the local authority in the execution of the said Acts, and shall be paid by the local authority to the Board on demand, and in default the Board may recover the amount of the expenses with costs from the local authority.

(4) For the purposes of this section an order of the Board shall be conclusive in respect of any default, amount of expenses, or other matter therein stated or appearing.

(5) Any public analyst appointed under the Sale of Food and Drugs Acts shall furnish such proof of competency as may from time to time be required by regulation framed by the Local Government Board.

4.—(1) The Board of Agriculture may, after such inquiry as they deem necessary, make regulations for determining what deficiency in any of the normal constituents of genuine milk, cream, butter, or cheese, or what addition of extraneous matter or proportion of water in any sample of milk (including condensed milk), cream, butter, or cheese, shall, for the purposes of the Sale of Food and Drugs Acts, raise a presumption, until the contrary is proved, that the milk, cream, butter, or cheese is not genuine or is injurious to health, and an analyst shall have regard to such regulations in certifying the result of an analysis under those Acts.

(2) Any regulations made under this section shall be notified in the London and Edinburgh Gazettes, and shall also be made known in such other manner as the Board of Agriculture may direct.

5. The provisions of the Margarine Act, 1887, as amended by this Act, shall extend to margarine-cheese, and shall apply accordingly, with the substitution of "margarine-cheese" and "cheese" for "margarine" and "butter," and provided that all margarine-cheese sold or dealt in otherwise than by retail shall either be enclosed in packages marked in accordance with the Margarine Act, 1887, as amended by this Act, or be itself conspicuously branded with the words "margarine-cheese."

6.—(1) Where under this Act, or the Margarine Act, 1887, it is required that any package containing margarine or margarine-cheese shall be branded or marked the brand or mark shall be on the package itself and not solely on a label, ticket, or other thing attached thereto.

(2) The letters required to be printed on the paper wrapper in which margarine or margarine-cheese is sold shall be capital block letters not less than half an inch long and distinctly legible, and no other printed matter shall appear on the wrapper.

(3) The words "or with" in Section 6 of the Margarine Act, 1887, shall be repealed.

7.—(1) Every occupier of a manufactory of margarine or margarine-cheese, and every wholesale dealer in such substances, shall keep a register showing the quantity and destination of each consignment of such substances sent out from his manufactory or place of business, and this register shall be open to the inspection of any officer of the Board of Agriculture.

(2) Any officer of the Board of Agriculture shall have power to enter at all reasonable times any manufactory of margarine or margarine-cheese, and to inspect any process of manufacture therein, and to take samples for analysis.

(3) If any such occupier or dealer—

(a) fails to keep such a register, or

(b) refuses to produce the register when required to do so by an officer of the Board of Agriculture, or

(c) fails to keep the register posted up to date, or

(d) wilfully makes any entry in the register which is false in any particular, or

(e) fraudulently omits to enter any particular which ought to be entered in the register,

he shall be liable, on summary conviction, for the first

offence to a fine not exceeding ten pounds, and for any subsequent offence to a fine not exceeding fifty pounds.

(4) The provisions of section nine of the Margarine Act, 1887, relating to registration of manufactories shall extend to any premises wherein the business of a wholesale dealer in margarine or margarine-cheese is carried on.

(5) The registration of a manufactory or other premises shall be forthwith notified by the local authority to the Board of Agriculture.

8. It shall be unlawful to manufacture, sell, expose for sale, or import any margarine, the fat of which contains more than ten per cent. of butter-fat, and every person who manufactures, sells, exposes for sale or imports any margarine which contains more than that percentage, shall be guilty of an offence under the Margarine Act, 1887, and any defence which would be a defence under section seven of that Act shall be a defence under this section, and the provisions of the former section shall apply accordingly.

Provided that nothing in this section shall apply to any margarine manufactured or imported in fulfilment of any contract made before the twentieth day of July, one thousand eight hundred and ninety-nine.

9. Every person who, himself or by his servant, in any highway or place of public resort sells milk or milk or cream from a vehicle or from a can or other receptacle shall have conspicuously inscribed on the vehicle or receptacle his name and address, and in default shall be liable on summary conviction to a fine not exceeding two pounds.

10. In the case of a sample taken of milk in course of delivery, or of margarine or margarine-cheese forwarded by a public conveyance, the person taking the sample shall forward by registered parcel or otherwise a portion of the sample marked, and sealed or fastened up, to the consignor if his name and address appear on the can or package containing the article sampled.

11. Every tin or other receptacle containing condensed separated or skimmed milk must bear a label clearly visible to the purchaser on which the words "Machine-skimmed milk," or "Skimmed milk," as the case may require, are printed in large and legible type, and if any person sells or exposes or offers for sale condensed separated or skimmed milk in contravention of this section he shall be liable on summary conviction to a fine not exceeding ten pounds.

12. The label referred to in section eight of the Sale of Food and Drugs Act, 1875, shall not be deemed to be distinctly and legibly written or printed within the meaning of that section unless it is so written or printed that the notice of mixture given by the label is not obscured by other matter on the label; provided that nothing in this enactment shall hinder or affect the use of any registered trade mark, or of any label which has been continuously in use for at least seven years before the commencement of this Act; but the Comptroller-General of Patents, Designs, and Trade Marks shall not register any trade mark purporting to describe a mixture unless it complies with the requirements of this enactment.

13. In section fourteen of the Sale of Food and Drugs Act, 1875, the words "offer to" and the words "proceed accordingly and shall" shall be repealed.

14. The provisions of section three and section four of the Sale of Food and Drugs Act Amendment Act, 1879 (relating to the taking of samples of milk in course of delivery), shall apply to every other article of food; provided that no samples shall be taken under this section except upon the request or with the consent of the purchaser or consignee.

15. In section sixteen of the Sale of Food and Drugs Act, 1875, the words "registered parcel" shall be substituted for the words "registered letter."

16. Any person who wilfully obstructs or impedes any inspector or other officer in the course of his duties under the Sale of Food and Drugs Acts, or by any gratuity, bribe, promise, or other inducement prevents, or attempts to prevent, the due execution by such inspector or officer

of his duty under those Acts, shall be liable, on summary conviction, for the first offence to a fine not exceeding twenty pounds, for the second offence to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds.

17.—(1) Where, under any provision of the Sale of Food and Drugs Act, 1875, a person guilty of an offence is liable to a fine which may extend to twenty pounds as a maximum, he shall be liable for a second offence under the same provision to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds.

(2) Where, under any provision of the Sale of Food and Drugs Acts, a person guilty of an offence is liable to a fine exceeding fifty pounds, and the offence, in the opinion of the court, was committed by the person accused, that person shall be liable (if the court is of opinion that a fine will not meet the circumstances of the case) to imprisonment, with or without hard labour, for a period not exceeding three months.

18. Notwithstanding anything in section seventeen of the Sale of Food and Drugs Act, 1875, where any article of food or drug is exposed for sale in an unopened tin or packet duly labelled, no person shall be required to sell it except in the unopened tin or packet in which it is contained.

19.—(1) When any article of food or drug has been purchased from any person for test purposes, any prosecution under the Sale of Food and Drugs Acts in respect to the sale thereof, notwithstanding anything contained in section twenty of the Sale of Food and Drugs Acts, 1875, shall not be instituted after the expiration of twenty-eight days from the time of the purchase.

(2) In any prosecution under the Sale of Food and Drugs Acts the summons shall state particulars of the offence or offences alleged, and also the name of the prosecutor, and shall not be made returnable in less time than fourteen days from the day on which it is served, and there must be served therewith a copy of any analyst's certificate obtained on behalf of the prosecutor.

20.—(1) A warranty or invoice shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts unless the defendant has, within seven days after service of the summons, sent to the purchaser a copy of such warranty or invoice, with a written notice stating that he intends to rely on the warranty or invoice, and specifying the name and address of the person from whom he received it, and has also sent a like notice of his intention to such person.

(2) The person by whom such warranty or invoice is alleged to have been given shall be entitled to appear at the hearing and to give evidence, and the court may, if it thinks fit, adjourn the hearing to enable him to do so.

(3) A warranty or invoice given by a person resident outside the United Kingdom shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts, unless the defendant proves that he had taken reasonable steps to ascertain and did in fact believe in the accuracy of the statement contained in the warranty or invoice.

(4) Where the defendant is a servant of the person who purchased the article under a warranty or invoice he shall, subject to the provisions of this section, be entitled to rely on section twenty-five of the Sale of Food and Drugs Act, 1875, and section seven of the Margarine Act, 1887, in the same way as his employer or master would have been entitled to do if he had been the defendant, provided that the servant further proves that he had no reason to believe that the article was otherwise than that demanded by the prosecutor.

(5) Where the defendant in a prosecution under the Sale of Food and Drugs Acts has been discharged under the provisions of section twenty-five of the Sale of Food and Drugs Act, 1875, as amended by this Act, any proceedings under the Sale of Food and Drugs Acts for giving the warranty relied on by the defendant in such prosecution,

may be taken as well before a court having jurisdiction in the place where the article of food or drug to which the warranty relates was purchased for analysis as before a court having jurisdiction in the place where the warranty was given.

(6) Every person who, in respect of an article of food or drug sold by him as principal or agent, gives to the purchaser a false warranty in writing, shall be liable, on summary conviction, for the first offence to a fine not exceeding twenty pounds, for the second offence to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds, unless he proves to the satisfaction of the court that when he gave the warranty he had reason to believe that the statements or descriptions contained therein were true.

21. The justices or court referred to in section twenty-two of the Sale of Food and Drugs Act, 1875, shall on the request of either party under that section cause an article of food or drug to be sent to the Commissioners of Inland Revenue for analysis, and may, if they think fit, do so without any such request.

22.—(1) At the hearing of the information in any proceeding under the Sale and Drugs Acts, the production by the defendant of a certificate of analysis by a public analyst in the form prescribed in section eighteen of the Sale of Food and Drugs Act, 1875, shall be sufficient evidence of the facts therein stated, unless the prosecutor requires that the analyst be called as a witness.

(2) A copy of every such certificate shall be sent to the prosecutor at least three clear days before the return day, and if it be not so sent the court may, if it thinks fit adjourn the hearing on such terms as may seem proper.

23. This Act shall apply to Scotland with the substitution for "the Local Government Board" of "the Local Government Board for Scotland," and all powers and duties vested in or imposed on the Secretary for Scotland in relation to the Sale of Food and Drugs Acts shall be transferred to, vested in, or imposed on the Local Government Board for Scotland.

24. This Act shall apply to Ireland with the substitution for "the Board of Agriculture" of "the Department of Agriculture and Technical Instruction for Ireland," and for "the Local Government Board" of "the Local Government Board for Ireland," and for *The London and Edinburgh Gazette* of *The Dublin Gazette*.

25. In this Act, unless the context otherwise requires—

The expression "margarine-cheese" means any substance whether compound or otherwise, which is prepared in imitation of cheese, and which contains fat not derived from milk:

The expression "cheese" means the substance usually known as cheese, containing no fat derived otherwise than from milk:

The expression "local authority" means any local authority authorised to appoint an analyst for the purposes of the Sale of Food and Drugs Acts, and the expression "public analyst" means an analyst so appointed:

Other expressions have the same meaning as in the Sale of Food and Drugs Acts, and an offence under this Act shall be treated as an offence under those Acts.

26. For the purposes of the Sale of Food and Drugs Acts the expression "food" shall include every article used for food or drink by man, other than drugs or water; and any article which ordinarily enters into or is used in the composition or preparation of human food; and shall also include flavouring matters and condiments.

27. The enactments in the schedule to this Act are hereby repealed to the extent mentioned in the third column of that schedule.

28.—(1) This Act may be cited as the Sale of Food and Drugs Act, 1899, and the Sale of Food and Drugs Act, 1875, and the Sale of Food and Drugs Act Amendment Act, 1879, and the Margarine Act, 1887, and this Act may be cited collectively as the Sale of Food and

Drugs Acts, 1875 to 1899, and are in this Act referred to as the Sale of Food and Drugs Acts.

(2) This Act shall come into operation on the first day of January, one thousand nine hundred.

SCHEDULE: ENACTMENTS REPEALED.

Session & Chapter.	Short Title.	Extent of Repeal.
38 and 39 Vic., c. 63	The Sale of Food and Drugs Act, 1875	In Section 2 the definition of the term "food." In Section 14 the words "offer to," and the words "proceed accordingly and shall." Section 15. In Section 27, the words from "Every person who shall give a false warranty in writing" to "a penalty not exceeding twenty pounds."
42 and 43 Vic., c. 30	The Sale of Food and Drugs Act Amendment Act, 1879	Section 10.
50 and 51 Vic., c. 29	The Margarine Act, 1887	In Section 6 the words "or with," and the words, "not less than a quarter of and inchesquare."
54 and 55 Vic., c. 46	The Post Office Act, 1891	Section 11.

SOME SHORTCOMINGS OF THE WEIGHTS AND MEASURES ACTS.

By MR. ALLAN GRAINGER,

Chief Inspector of Weights and Measures to the Birmingham Corporation.

In an address recently delivered to the members of the Grocers' Federation Mr. Granger said:—

Permit me in the first place to say that it is a matter of satisfaction to myself to have this opportunity of addressing some observations upon the Weights and Measures Acts to a representative meeting of the Federation of Grocers' Associations of the United Kingdom—one of the largest and most influential bodies of its kind. It is pleasant to know that the relation existing between the inspected and the inspectors is such as to permit of friendly intercourse for the exchange of opinions, to the advantage, I hope, not only of ourselves, but of the public generally. There is no reason why trader and inspector should not regard each other with the kindest feelings. The more the two know of each other, the less will be the friction. On the one hand there will be less straining after technicalities, and on the other a better knowledge of the Acts, and a better disposition towards their requirements. I apprehend that it is the duty of the inspector to hold the balance fairly between the trader and the purchaser. This is a point which it is to be feared is often lost sight of, as also is the extent of the indebtedness in this respect of the trader to the inspector. A scale may be unjust against the seller as well as against the buyer. If through wear and tear, or from faulty construction, a scale be not sensitive, overweight is given at each weighing, the amount varying according to the degree of dulness of the scale. In time this excess weight often runs into large quantities, and consequently so much value is lost to the seller. In this connection it behoves every trader to keep a vigilant eye upon the weighing instruments used in his business,

and not to depend solely upon the inspectorial visit. Moreover, in this, as in so many other matters, an article of good quality, though the first cost may be greater, is the cheapest in the long run. Nothing is to be gained by using cheap rubbishy scales. A good weighing machine soon pays for itself by the precision of its working.

Classification of Weighing Instruments.

As many of you are aware, there are three classes of weighing instruments, viz.—"Class I.," "Class II.," and "Class III." The inspector's test for sensitiveness varies according to the class which is marked upon the instrument. For compound lever machines, which comprise platform machines and weighbridges, there is a special table of allowances, and they do not fall within the classification mentioned. A scale marked "Class I.," is put to a more severe test than a "Class II." scale, which in its turn is tested more severely than a scale marked "Class III." For instance, a beam-scale of 56 lbs. capacity "Class I." when presented for verification would not be passed by an inspector unless it turned with one dram when loaded up to its full capacity. A similar instrument but marked "Class II.," would be passed if it turned with four drams; and six drams would be allowed if it were marked "Class III." You will thus see that the degree of sensitiveness required of "Class II." scales is one-fourth, and of "Class III." scales one-sixth of that of "Class I." scales. The model regulations issued by the Board of Trade for the guidance of inspectors in the discharge of their duties state that weighing instruments such as those used for bread and meat should be marked "Class II." when submitted for verification, and those which are used by itinerant vendors or for weighing coals, vegetables, wood, and metal should be marked "Class III." This arrangement is hardly satisfactory. A manufacturer classifies the scales he makes as he thinks fit, and if they are submitted by him for verification, as is often the case, the inspector is not in a position to know to what purpose they are likely to be put. As soon as the official stamp is affixed to a scale it becomes a legal instrument, and may certainly be applied to what use the owner thinks fit. But here the user and the inspector sometimes clash. The latter finding, say, a "Class III." scale used for what is considered a "Class II." purpose, takes objection to it, and perhaps he defaces the stamp. This cause of trouble might be avoided by classifying scales according to their construction, and not according to the purpose for which they are to be used. Let there be particular tests laid down for beam-scales, counter machines, compound lever machines, steelyards, and spring balances, and such a classification would, I think, be more satisfactory and more logical than the existing one. At the present time the beam-scale is practically the only one which meets the requirements of "Class I.," and I would strongly urge the largest possible use of this class of scale. The beam-scale, whilst it is the most ancient, is the simplest and most sensitive form of weighing instrument. It should be employed in the fullest extent in trade, as it undoubtedly gives the best results. The shopkeeper buys wholesale and sells retail. The loss occasioned by a sluggish scale will sometimes make all the difference between a profit and a loss.

Verification Fees.

The question of the fees to be paid for the verification and stamping of weights, measures, and weighing instruments is naturally one which appeals to all traders who are affected by the Weights and Measures Acts, and it is one which has of late years attracted considerable attention. Section 13 of the 1889 Act says:—"An inspector of weights and measures may take in respect of the verification and stamping of weights, measures, and weighing instruments the fees specified in the first schedule to this Act and no others, and no discount shall be allowed." One would think that this was clear enough and precise enough to secure a uniform charge throughout the country. What do we find? Glass and earthenware pint and half-pint measures being verified and stamped in some places for a half-penny, and in others for a farthing, notwithstanding that

the statutory fee is a penny, and which, bear in mind, is paid in the great majority of cases. It comes about in this way. The measures are stamped on the premises of the manufacturer or dealer, who supplies the necessary machinery and assistance. In consideration of these services a rebate, not a discount mark you, is allowed of sixpence or ninepence in the shilling. The obligation, I think, should be the other way about, for the dealer gains considerably by the inspector attending at his premises. It saves the expense, time, and trouble of sending the measures to the inspector's office, and of the unpacking and repacking that would be involved with the attendant risk of breakages. The effect of this system is to set up an unseemly competition between local authorities, and the dealer in the most favoured district is given an unfair advantage over his competitors in other places where the rebate is less or is unknown altogether. But, better still, one or two local authorities have recently determined not to charge verification fees at all, and the lucky traders within their district will get off scott-free in this respect. On the other hand, there are many traders who have to pay for the re-verification of their weighing and measuring plant every time that operation takes place (which is at least once a year), although the appliances may be correct and duly stamped. This practice acts as a bar to frequent re-verification, which ought to be encouraged as much as possible. To my mind traders ought to have the facility of ascertaining, free of charge, whether or not their scales, weights, and measures are correct. Such facility does exist in some places. The charging of fees on the occasion of each and every re-verification present, to say the least of it, a striking contrast. Again, a trader may move from one district to another. His weighing and measuring appliances are in order in every respect, but he is sometimes called upon to have them re-stamped because the inspector here required all weights, measures, and weighing instruments within his district to bear his own stamp. In view of this, one wonders what Section 45 of the 1878 Act means, which sets forth that "a weight or measure duly stamped by an inspector under this Act shall be a legal weight or measure throughout the United Kingdom unless found to be false or unjust, and shall not be liable to be re-stamped because used in any other place other than that in which it was originally stamped." Let a railway company move a machine from one district to another and let an inspector insist on re-stamping. He may re-stamp, but he will whistle for the fee. In brief, the question of fees is at the present time in a delightful muddle. *(To be continued next week.)*

FERRUGINOUS EGGS.

It may truly be said that there is scarcely any branch in which medicine has not advanced within the last twenty years, but in no one branch has more improvement been shown than in the compounding and putting together of drugs. No more is the unwilling patient to swallow large doses of nauseating medicine, for sugar-coated pills, capsules, and wafers have come into use, and the patients can now take the most vile-tasting medicines without discomfort. According to a Transatlantic contemporary, an ingenious person has come forward with a still more ingenious plan which opens up to pharmacy unbounded possibilities of going still further ahead. On account of the difficulty of assimilating iron as a medicine, a French chemist has sought to introduce it in a digestible way by what he terms ferruginous eggs. Hens can digest iron easily, while rendering it back through the albumen of their eggs in a form which is easily digested by the weaker stomachs of mankind. A salt of iron is given to the hens with grains of wheat. A dozen of these medicated grains of wheat a day make the hens, after three or four days, lay eggs, which are very rich in iron already digested. The chemist in question is said to be experimenting further with other drugs, and it is not without the bounds of possibility we shall shortly be able to take our medicines in the form of eggs.—*Grocers' Review.*

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Food and Sanitation.

SATURDAY, SEPTEMBER 2, 1899.

PUBLICANS AND THE NOTICE SWINDLE.

SOME of our readers, we are glad to note, are taking objection to the renewal of licenses to publicans who rob the public under the dilution notice dodge. A recent glaring case showed that the article sold as whisky was fraudulently mixed with no less than nineteen per cent. of water over and above the twenty-five per cent. allowed by the Food and Drugs Act, i.e., the publican was obtaining spirit price for that percentage of water, but he escaped

conviction because he exhibited a notice in a conspicuous place at the end of the bar:—"All spirits sold in this establishment are diluted, but not below half proof strength." Another notice contained the words: "No specific alcoholic strength guaranteed," and had been hung up for ten or twelve years. That such notices ever received judicial encouragement is disgraceful, as the thievery fostering decision of Lord Chief Justice Cockburn enables the dishonest publicans to plunder the public of over £300,000 per year for water sold at spirit price and to set the Food and Drugs Act at defiance. It is obvious that publicans of this character are not fit and proper persons to hold licenses, and we hope our subscribers will oppose renewals to all such persons, as was successfully done at several places last year, renewals of licenses being granted only on the understanding that the notices be removed and the spirits sold at proper strength.

WEIGHING PAPER WITH SUGAR.

THE legality of weighing paper with sugar has again been challenged. In the Queen's Bench Division, Dublin, recently, Mr. Gibson (instructed by Mr. Hanmore) applied on behalf of Peter Gaughran, of Navan, grocer, for a conditional order to quash a conviction of the 2nd of August by the justices who presided at the Navan Petty Sessions, in the case of a summons by Sergeant Francis Marron against his client. Mr. Gaughran was summoned under the Weights and Measures Act of 1878. The complainant was an inspector appointed under that Act, and he stated that on the 26th of June last he visited defendant's establishment, and tested the scales and beams, which he found correct; that a woman entered and purchased 1lb. of sugar, which, he stated was eight drachms less than the full weight, and that he ascertained such deficiency not on weighing the sugar so purchased, but by weighing a 1lb. sugar bag similar to that in which the sugar was weighed. Mr. Hanmore further stated that the evidence given by Sergeant Marron, on the 19th of July, was repeated on the 6th of August, and that he (Mr. Hanmore) then submitted that no offence was disclosed, and that he quoted a decision by Mr. Justice Matthews and Mr. Justice Bruce, reversing a conviction of the Wolverhampton magistrates under similar circumstances. After a lengthened consultation, in which the petty sessions clerk and the district inspector took part, the magistrates fined his client 1s. and 1s. 6d. costs, or, in the alternative, seven day's imprisonment. He (Mr. Hanmore) submitted that if the magistrates' order was not reversed it would revolutionize trade and cause great inconvenience to the vendor as well as to the purchaser. The practice of selling and weighing sugar was at the expense of the vendor, and for the convenience of the purchaser. Mr. Justice Kenny granted the conditional order.

IS CAMPHORATED OIL A DRUG?

EDWARD GRANT, grocer, of Turvey, was summoned at Bedford Petty Sessions for selling camphorated oil, which was not of the substance and quality demanded, on July 29th. Mr. Clare defended. P.S. Mason, Inspector under the Food and Drugs Act, stated that he purchased from the defendant twelve penny bottles of camphorated oil, telling defendant why he did so. He submitted samples to the analyst, and the certificate produced showed that the oil was composed of 17.8 of camphor, and 82.2 of olive oil, whilst according to the British Pharmacopœia it should contain at least 21 per cent. of camphor. Mr. Clare submitted that there was no case, as he objected that camphorated oil was not a drug, neither was it food. He pointed out that a drug was either a medicine for internal or external application, but camphorated oil was not a

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medicine. This was the definition of "drug" given by the Act, which also stated that where a drug was compounded there was no offence committed. The penalty with regard to a compound would be where the article sold was not composed of ingredients in accordance with the demand of the purchaser. According to his own statement the Inspector demanded camphorated oil, and this he was supplied with. Dr. Stevenson, the analyst, stated that there was a deficiency of 15 per cent., whilst the strength given by the British Pharmacopœia was at least 21 per cent. *But the Inspector never asked for oil of the strength defined by the British Pharmacopœia or any other copœia,* and merely for twelve penny bottles of camphorated oil. Another point of objection was that there was really nothing to show that the oil was not up to the strength required by the Pharmacopœia. Everyone knew that oil always goes to the top, and that camphor would naturally go to the bottom, and on the transference of the article to fresh bottles he would be ready to assert that there would be more camphor at the bottom of the bottles than oil. The inspector did not produce the bottles. The defendant was manager of the Turvey branch of the Bedford Co-operative Society, from whence the camphorated oil had been received by mistake. After being retired for a considerable time, the Bench decided that the case must proceed. Defendant was called to state that when the Inspector emptied the bottle, these was a thick sediment at the bottom which he could not get out. This was the only defence offered, the Inspector admitting it, and again after retiring, the Chairman stated that the Bench had decided to convict. A fine of £1 and costs was therefore imposed.

WATER AT SPIRIT PRICE.

At Ulverston on August 17th, Samuel Hudson, of the Crow Inn, Newton-in-Cartmel, was charged with selling adulterated whisky. Inspector Murphy said that on July 19th he purchased a pint of whisky from the defendant; he told him it was for analysis, and divided it, leaving a portion with defendant. P.S. Whitham took the portion of whisky produced to Dr. Campbell Brown, of Liverpool, the county analyst, and he produced his certificate, which stated that the whisky was $34\frac{1}{2}$ degrees under proof, and $9\frac{1}{2}$ below the statutory limit as allowed under the Act to be sold. Mr. E. Walker, for the defence, pleaded not guilty. His client got his spirits from his merchant at a certain strength, and he only added the usual water to reduce it to its commercial value. The only inference was that the spirits had evaporated. The Clerk: My experience is just the other way. The 25 per cent. was put into the Act in order to clear any possible changes that might take place. Mr. Walker said his client had been 19 years in the trade. He was always known as selling a good article, and this was the first charge against him. He

would call Mr. Hudson to show how much water he had put in. The Clerk: Are you going to call the spirit merchant who sold defendant the whisky? Mr. Walker: No. The Clerk: Well you can't call your client now. You should have done so before you addressed the Bench. The Chairman said the case was quite clear, and defendant would be fined £2 and costs.—James Danson, of the White Hart Inn, Colton, was also charged with selling adulterated whisky on July 19th. Inspector Murphy proved the purchase of the whisky, and P.S. Whitham took it to Dr. Campbell Brown for analysis, which latter showed that it was $33\frac{1}{2}$ under proof, and $8\frac{1}{2}$ under the statutory limit. Defendant pleaded guilty. He was away from home. They had run short of whisky in the keg, his wife mixed some, and had evidently put too much water in. Fined £2 with costs.—Mary Benjamin, licensee of the Dusty Forge Inn, Michaelstone-super-Ely, was summoned at Barry Dock Police Court, on August 18th, for selling adulterated whisky. Police-inspector Williams purchased a sample on that day, which, when analysed by the County Analyst, was found to contain $26\frac{1}{2}$ per cent. of water, while the Act only allowed adulteration to the extent of 25 per cent. Mr. J. H. Jones, solicitor, Cardiff, who appeared for the defendant, pleaded in mitigation that the hydrometer used in testing the whisky had been found to be defective. A fine of 5s. and costs was imposed.

At Heywood, on August 23rd, Joseph Turner, the landlord of the Heywood Arms, George-street, Heywood, was summoned for selling adulterated whisky and gin. Sergeant Wilcock stated that at the request of the superintendent of the police he visited the hotel on the 17th of July and purchased a pint of whisky and a pint of gin for analysis. The samples were sent on to Dr. Campbell Brown, the analyst at Liverpool, and he certified that the whisky contained $3\frac{1}{2}$ per cent. more water than was allowed by the Act, and that the gin contained 4 per cent. more than was allowed. Defendant pleaded guilty, and urged that the hydrometer by which he had been guided in the mixing of the spirits had gone wrong. Previously samples had been taken of his spirits by the police, but there had been no complaint. He was fined 5s. and costs in both cases.

At Midhurst Petty Sessions, Edmund Frederick Goldsmith, landlord of the Hollist Arms, Lodsworth, was summoned for, on the 26th July, selling six ounces of brandy not of the proper substance or quality, being adulterated by a mixture of water, making the spirits 29 degrees under proof. Mr. E. B. Wannop, of Littlehampton, appeared for the defendant, and entered a formal plea of not guilty. P.C. George Wakeford, of Fernhurst, deposed that he went to the defendant's house on July 26th and called for 1s. worth of best brandy, to be put in a bottle which he handed in. Witness was served by defendant's son, Frederick. He asked to see the landlord or his wife, and both appearing he stated that he was a police officer in plain clothes, and had obtained the spirits for analysis by the Public Analyst under the Food and Drugs Act. Defendant's wife said at the time to witness, "You haven't best brandy there. If you are a man, you'll let me give it you." Witness divided the brandy into three portions, giving the defendant one of the three bottles and took the other two away. On leaving the premises defendant remarked, "I know you haven't got best brandy before you take it away." The bottles were then taken to Superintendent James Ford, at Midhurst. By Mr. Wannop: The brandy was taken from a bottle about half full. Superintendent James Ford, of Midhurst, said he directed the last witness to purchase a sample of brandy from the Hollist Arms, Lodsworth, for analysis. He handed in the Public Analyst's report, which showed that there was 94.7 of brandy and 5.3 of water. Mr. Wannop said he was bound to admit that a technical offence had been committed. The spirits were, however, only 4 degrees below the standard. Defendant was put in the box, and stated that the brandy had been kept in a corked

bottle. He stated that when he "broke the brandy down" with waterheaded rather less than according to the instructions from the Brewery he should have done, and he added no water since. The Chairman said the Bench must inflict a fine in this case, and would fine defendant £1 and costs, the conviction not to be recorded on the license.

A NOVEL MILK DEFENCE.

At Southwark, on August 24th, Mr. F. W. Bartlett, trading as the Cream Dairy Company, at 2½, St. Andrew's-hill, E.C., appeared before Mr. Slade on three summonses for selling milk containing added water to the extent of 16, 13, and 7 per cent. respectively. Mr. Ricketts defended, and stated that his client had been in business 12 years, but had never before been summoned. He purchased the milk with a warranty, but as he had not taken steps to trace from which farmer the milk in question had been sent, he was unable to avail himself of that protection. On receiving the summonses he communicated with all his farmers, and learned from them that owing to complaints about the milk they sent to London being sour on arrival, they had resorted to the expedient of putting blocks of ice into it before sending away. The only thing he could suggest was that the farmers had put too much ice in the milk. Mr. Slade ordered the defendant to pay £5 and costs on the first summons, and the costs of the other two, £6 17s. 6d. in all.

ANALYSTS DIFFER.

In Edinburgh Sheriff Summary Court on August 22nd, Acting Sheriff-Substitute Sym gave judgment in a complaint at the instance of Robert Lindsay, Sanitary Inspector for Midlothian, against the West Calder Co-operative Society, charging them with having, on 17th July last, in the Society's branch at Pumpherston, Mid Calder, sold to him 1 lb. of butter which was not of the nature of the article demanded, being adulterated to the extent of 9 per cent. of added foreign fat. Mr. A. B. Horn, S.S.C., prosecuted for the County Council, and Mr. Lyon Mackenzie, advocate, instructed by Menzies, Bruce, Low and Thomson, S.S.C., defended. Evidence was led at some length. The analysis upon which the prosecution was based was prepared by Mr. John Hunter, County Analyst; but for the defence Mr. Ivison M'Adam, Royal College of Surgeons, Edinburgh, and Dr. Tatlock Thomson, Public Analyst for Govan and other burghs, declared that the sample was genuine butter. The Sheriff found the charge not proven, remarking that at any rate it was a very narrow case, and the evidence of the skilled witnesses was so contradictory that he could not see his way to sustain the complaint.

SEIDLITZ POWDERS.

At Leicester County Police, Albert Davenport, grocer, Great Wigston, was summoned for selling adulterated seidlitz powders at Great Wigston on the 17th ult. Florence Stubbs stated that she purchased a dozen seidlitz powders at the defendant's shop on the instructions of Supt. Ormiston, to whom she afterwards gave them. Supt. Ormiston deposed to sending a portion of the purchase to Dr. Dyer, the County Analyst. His report was to the effect that the alkaline portion of the powder in the blue paper was as it should be, but the acid portion of the powders in the white paper, instead of consisting solely of tartaric acid, contained 12 per cent. of alum, which as an ingredient he considered injurious. Councillor Tollington said he was agent for the firm in Liverpool who supplied the powders. He had represented them for twenty or thirty years. Some time since he wrote to the firm with respect to the quality of the powders, and in reply received a letter (produced), which led him to suppose that prior to March last the powders were not what they ought to have been, but it was stated on a box (produced by witness), received since then, that the quality of the powders was guaranteed. Defendant said he thought the powders were genuine. The Bench fined Davenport £1 7s. 7d., in-

clusive of costs, or 14 days. The Chairman remarked that the costs ought to be paid by the firm, but they could not compel them to do so, inasmuch as the powders were sold by the defendant.

MARGARINE ACT PROSECUTIONS.

At West Ham, on August 24th, Jenkin Morgan, of 35, Ben Johnson-road, Stepney, and trading at 65, Angel-lane, Stratford, was summoned before Mr. Gillespie, for selling butter which, on analysis, proved to contain 88 per cent. of fats other than butter fats. Mr. Ricketts appeared for the defendant, who, he said was too ill to attend. He stated he recognised the adroitness of Dr. Sanders and the inspector, in taking proceedings under the Food and Drugs Act, for by this proceeding there was no defence left to an innocent employer. Under the Margarine Act when an assistant neglected his master's orders and offended, the penalty was put on him. Mr. Morgan took every precaution to prevent the selling of margarine as butter, and this was not done with his sanction, but he (Mr. Ricketts) was not insensible to the fact that under the Food and Drugs Act an employer was liable for the acts of an employee who sold an adulterated article. He would, however, point out that the prosecution invited offences of the kind. The inspector was sent in to ask for butter at a price at which it was not ordinarily sold. In this case "tenpenny butter" was asked for, and Mr. Morgan's instruction was that when such low-priced butter was asked for the purchaser was to be told so and be offered margarine which was to be sold duly labelled, in accordance with the terms of the Margarine Act. Dr. Sanders put in the analyst's certificate, and said that the defendant had been twice convicted under the Margarine Act, once he was fined £8 and costs, and on the next occasion very heavily. Mr. R. H. Gillespie imposed a fine of £10 and 32s. 6d. costs. There was a further summons for the same offence, under the Margarine Act, for selling margarine not duly labelled, but this was withdrawn, and with it fell a summons taken out by Mr. Morgan against Miss Sophia Jones, one of his employees, for selling the margarine without labelling it properly.

At the same court, George Cullum, of 264, Gipsy-lane, Forest-gate, was summoned for exposing margarine for sale on which was not exposed a label marked in 1½ in. square letters "Margarine." An inspector asked for a sample out of "that box," indicating a box which was unlabelled and the point of the defence was that the box the inspector chose to have the sample out of was one in which the "scrapes" were put in. In it was pieces of butter as well as margarine and bacon fats. Dr. C. Sanders: If you have any doubt about whether the sample I had was margarine or "scrapes," there is a portion of it in court. You can examine it. Mr. Gillespie: No, thank you. (Laughter). We have already heard that one of the defendants is laid up; I don't know if he eats his own butter. Mr. W. E. Windsor (who defended): But this is not butter, it is "scrape." Mr. Gillespie: Never mind; perhaps even an inspection might make me feel unwell. Subsequently, when the conflict of evidence was pronounced Mr. Gillespie seemed inclined to look at the portion of the sample, and it was handed up, but on being told that it was more than a month old, and that "it might have changed," the packet was left unopened. In the result, his worship said he had no doubt the parcel from which the sample was taken was exposed for sale, and also that it was not properly labelled. He imposed a fine of £5 and 31s. 6d. costs.

On August 25th, at Rochdale, William Holland, manager of the Irish Creamery Company's shop, York-shire-street, Rochdale, answered two adjourned summonses, one of which alleged that he delivered to Thomas Whiteley, food and drugs inspector, a pound of margarine without enclosing it in a paper wrapper on which was printed the word "margarine" in capital letters not less than a quarter of an inch square. These proceedings were taken under the Margarine Act, 1867. The second sum-

mons alleged that defendant unlawfully "sold to the prejudice of the said Thomas Whiteley a pound of butter which was not of the nature, substance, and quality demanded." It was alleged that both the offences were committed on July 21st. Mr. J. Leach (Town Clerk) appeared for the prosecution; Mr. A. Molesworth defended. The Town Clerk decided to first take the summons for "unlawfully selling to the prejudice of the purchaser a pound of butter which was not of the nature and substance demanded by the purchaser." Mr. Leach added that these proceedings were taken under the Food and Drugs Act, 1875. Mr. Whiteley was the inspector appointed to see that the provisions of that Act were carried out in the borough. On Friday, July 21st, he instructed Mrs. Mary Ann Longinotto to purchase some butter at the shop of which the defendant was the manager. When she was leaving the shop Mr. Whiteley took her back again, and told defendant that the butter had been purchased for the purpose of having it analysed by Mr. Stenhouse, the borough analyst. Mr. Whiteley offered to divide the sample into three and to leave one-third with the defendant, but this offer was refused. The butter was therefore forwarded to the analyst, who had certified that it was "a common margarine mixture, and contained less than 20 per cent. of real butter. No change had taken place in the condition of the sample which would interfere with its analysis." Mary Ann Longinotto, Spring-street, Toad-lane, was called as a witness. She said she went into defendant's shop at Mr. Whiteley's request, but she would not have done so if she had known that Mr. Whiteley intended to have the butter she purchased for him analysed. Her character was as good as anyone's in Rochdale. She saw the defendant in the shop, but she could not say that he gave her the butter. He was in the shop when Mr. Whiteley took her back again. In reply to Mr. Molesworth, the witness added that after she had made some purchases defendant said to her, "Do you want any butter or margarine?" She replied that she would have a pound, and he gave it to her, but she could not swear whether she asked for "margarine" or "butter." Mr. Molesworth: There is no case. The Town Clerk was allowed to withdraw this summons. The Town Clerk then stated that he would proceed with the summons for selling margarine in a wrapper without the word "margarine" printed upon it. Mr. Molesworth said he would not dispute the facts which related to this offence. Mrs. Longinotto repeated the facts as to her visit to the defendant's shop, and added that she could not say whether she asked for "a pound of margarine" or "a pound of butter." She paid 10d. for the article supplied to her. She could not swear whether there was anything printed on the paper in which the article was wrapped. Thomas Whiteley deposed that he met the last witness coming out of the defendant's shop with the preparation which she had purchased. Witness took her back into the shop and asked her to point out the person from whom she had made the purchase. Witness told defendant that the preparation had been purchased for him for analysis, and offered to divide it into three parts, but the defendant refused the offer. Witness therefore took the whole of the butter to the analyst. There was no printing on the paper in which the article was wrapped. Mr. Molesworth, for the defence, argued that there was no doubt that the paper should have been marked with the word "margarine." Many persons liked to have their purchases wrapped in plain paper, and he (Mr. Molesworth) was afraid that shopkeepers who desired to please their customers in this respect very often fell into a snare. The Chairman: Are there any previous convictions? Mr. Molesworth: If there are any previous convictions they must be proved properly. The Town Clerk: There was a previous conviction in this Court a month ago, and I take it that in regard to that conviction the Court record is a sufficient proof. The Clerk (Mr. J. R. Hartley): It is not a legal proof, and if you want to substantiate any previous conviction you must prove it legally by producing the original record of a certified copy thereof. You have not given any notice that

you required the record, and it is not here. Richard Spencer, inspector under the Food and Drugs Act, Bolton, produced records of the conviction of the defendant at Bolton Borough Court on the 17th February, 1898, and the 13th June, 1898. In one case the penalty was £10; in the other case a fine of 10s. was imposed. The Chairman said the defendant would be fined £50 and costs, to be levied by distress if necessary, or three month's imprisonment.

REFUSING TO SELL FOR ANALYSIS.

WILLIAM LAWS was charged at Newcastle, on August 25th, under the Food and Drugs Act, with refusing to sell to an inspector an article of food when asked to supply the same. Mr. Sanders prosecuted for the Sanitary Committee of the Corporation, and Mr. Aitchison defended. Mr. Sanders said that the prosecution was under Section 17 of the Act of 1875. It was to the effect that if any inspector applied for the purchase of any article of food and tendered the price of the article for analysis, the person who refused to sell was liable to a penalty not exceeding £10. He explained that a sanitary inspector had gone into the shop of the defendant in Belle-grove, Spital Tongues, and there saw two substances exposed for sale. They resembled butter. He suspected one to be margarine, and he asked for three-quarters of a pound. Mrs. Laws hesitated a while, then made a search and afterwards said, "I won't sell it; I have no margarine papers." The sample, Mr. Sanders continued, was not marked "Margarine," and the man was in uniform. Sir Chas. Hamond proceeded to argue with Mr. Sanders as to whether the woman was not within her rights in refusing to supply a man who had not stated he was an inspector, and who had not produced any authority. A uniform, he pointed out, did not constitute authority. Mr. Gooden thought the uniform did establish the man's position. Ultimately, Mr. Sanders asked that the point might be reserved for a case if need be, and that the evidence might be taken. It was decided to do this. A Sanitary Inspector was then sworn. He said that on August 10th, he went into the shop in company with another inspector. Both substances they saw within resembled butter. Defendant's wife came forward and did what Mr. Sanders had described. Witness said to her, "If you don't sell you will be summoned." He asked her to sell three times. The husband afterwards came and put a label on the material. Only the "M" of the word "Margarine" could be seen on the label. Similar evidence was given by the other officer. Mr. Aitchison said Mrs. Laws had wanted to act strictly and properly within the lines of the law. She had not sold because she thought she would be prosecuted for so doing. The uniform did not matter much. There were numerous uniforms. The officer might have been a Barnum and Bailey's man (they wore uniforms) for what she knew. He submitted there was no case whatever. After references had been made to the fact that under the Margarine Act, which was passed much later than the Food and Drugs Act, it was an offence to sell margarine without labelled wrappers, and also that it was customary for inspectors after they had got the article to say they had bought the goods for the purpose of analysis. Sir Charles said that in his view, if the woman had erred, she had erred on the safe side. Had she sold she would have been liable to have been brought up, and the refusal to sell was for the sake of herself and with a view to avoid trouble. The case was involved in such obscurity that he personally did not feel justified in fining the woman. Mr. Sanders asked for a case to be stated. If there was no conviction they would never be able to get a sample. The Bench decided to retire. On returning, Sir Charles said the justices had carefully considered the question, and they thought there was a serious doubt about the subject, and they thought it their duty to dismiss the case on payment of costs. Mr. Sanders: You will of course, grant a case? Sir Charles: We will consider that matter, Mr. Sanders said he wished to lay the circum-

stances before the Sanitary Committee. Sir Charles: You can consult any committee you like. Mr. Aitchison hoped the Bench would not grant a case for a higher court. Sir Charles: We dismiss the case on payment of costs. That is our decision.

COPPER IN PEAS.

Wholesale Dealers Summoned for False Warranty.

As the sequel to a recent prosecution for selling bottled peas coloured with copper sulphate, Petty, Wood, and Co., wholesale grocers, 41 to 57, Southwark Bridge-road, S.E., were summoned at the Spelthorne Sessions, on Monday, for having wilfully given to Budgen and Co. (Limited) a label which falsely described the article of food sold by them. Inspector Tyler read a letter from the defendant company asking for an adjournment of the case, and this request was granted.

A PRIVATE PURCHASER PUNISHES A WHOLESALE PEPPER SWINDLER.

RECENTLY, in Birmingham, a private purchaser sent a sample of white pepper for analysis to Dr. A. Hill, public analyst, who found that it was adulterated with 25 per cent. of ground ginger. On receiving the certificate, he commenced proceedings in the County Court against the wholesale dealer who supplied him with the pepper, but withdrew the action on being paid £20 damages. We should like to see other grocers follow this example. They would soon purge the trade of fraud.

THE SALE OF TEA IN PACKETS.

An Important Case.

At the Richmond Police Court the Home and Colonial Stores Company appeared in a very ugly light. The summons was one taken out by the inspector under the Merchandise Marks Act, alleging that the defendants had applied a fraudulent description to three-quarters of a pound of tea sold by them at their Richmond branch. The evidence showed that an officer of the Inspector asked for three-quarters of a lb. of eighteenpenny tea. He was given two packages, apparently a half-pound and a quarter-pound in weight, but it was subsequently found that the actual weight of the tea in them was short of three-quarters of a pound by 4dr. 19gr. Mr. Bodkin, who appeared for the defence, did not question the facts of the case. But he submitted that to come within the provisions of the Act there must be some physical and visible fraudulent mark on the goods or the covering thereof. In this case there was no mark on the packages setting forth the amount of tea that they contained. In the course of his judgment in *Coppen v. More*, Mr. Justice Wright had clearly laid down that the whole framework and construction of the Act indicated that some visible mark was contemplated, and not a mere verbal description. There was no such written or printed description given by the shopman; they were simply handed to the purchaser. The Inspector said that he relied upon the description on the label. Mr. Bodkin said that "eighteenpenny" or "fourteenpenny" tea was not sold at so much per pound. It was simply a description of the quality. The magistrates, after a brief consultation, said that in their opinion the case was not made out, and they dismissed the summons.

POISONED BY TINNED LOBSTER.

A HOLIDAY visitor to the Mumbles, a superannuated Inspector of the Metropolitan Police Force, has been a patient at the Swansea Hospital for a week owing to blood poisoning. The ex-inspector was seized with severe illness after having partaken of a meal of tinned lobster, which, he says, seemed to be good, for he ate and enjoyed it immensely.

SOME SHORTCOMINGS OF THE WEIGHTS AND MEASURES ACTS.

By MR. ALLAN GRAINGER,

Chief Inspector of Weights and Measures to the Birmingham Corporation.

(Continued from page 418).

Technical Anomalies.

To an assembly of this kind the term "technical anomalies" will need no explanation. A trader somewhere in the country buys, say, a counter weighing machine from a local ironmonger, who has been supplied with it ready stamped for use by a manufacturer some hundreds of miles away. When the machine comes under the notice of the inspector for the district, it may be that he condemns it, not because its condition has altered since it was stamped, but because he applies a test different to that applied by the inspector who originally stamped the machine. Then the machine is thrown back upon the ironmonger, who in turn returns it to the maker. Not only is trouble and annoyance thus caused, but the cost of carriage has to be borne by someone. This is no hypothetical or exceptional case; numerous instances could be furnished. But not only upon the method of testing does trouble arise. There are a hundred and one points of detail concerning the construction of weighing instruments upon which inspectors of weights and measures differ. Frequently what one inspector will pass another will reject; and consequently we find certain machines being used in one district whilst their use is prohibited in another. With weights there is of course less trouble, but even here uniformity of action is wanting. A solid brass weight which is correct, and which would pass muster in most verification offices, would here and there be rejected because it was not drilled ready to receive adjusting lead. A pint earthenware measure eight fluid drachms in excess would meet the requirements of the regulations in Liverpool, Manchester, Birmingham, and elsewhere; but in Reading it would be rejected, because the allowance there is only six fluid drachms. And yet, as I have already stated, Section 45 of the 1878 Act says that a weight or measure duly stamped shall be legal throughout the United Kingdom. It is evident that if effect is to be given to the spirit of the Act, there must be some authority which shall decide what forms of weights, measures, and weighing instruments shall be permitted for use in the trade, and what tests shall be applied in their verification.

"Short" Weight and Measure.

That the law should ensure to the fullest possible extent the giving of just weight and measure as between buyer and seller is a matter which more or less affects all classes of the community; to the poor it is of vital concern, and it is of much moment to the honourable trader. That there is considerable fraud committed by the deliberate selling of goods under weight and under measure is certain, and it is those who can least afford to be thus robbed who suffer most. How this malpractice affects legitimate trading is known to those present better than it is to me. The public think, and you think so too, no doubt, that it is the inspector of weights and measures who should step in here and afford protection. He, however, is practically helpless. An inspector may go into a shop and ask for a pound of sugar. He is handed a packet from a shelf. On weighing the contents he finds that instead of a pound he has only got, say, three quarters of a pound of sugar. Yet there is no section in the Weights and Measures Acts under which he can take proceedings for such an offence. It seems scarcely credible, but it is so, and surely it is little less than monstrous. By Section 25 of the 1878 Act any trader who uses or has in his possession for use an unjust weight, measure, or weighing instrument is liable to a fine not exceeding £5 for the first offence. Section 26 says in effect where any fraud is wilfully committed in the using of any weight,

measure, or weighing instrument, the person committing the fraud and every person party to the fraud shall be liable to a fine not exceeding £5 for a first offence. Is not this sufficient? Far from it, and there is no other section of the Act which touches the matter. The practice of selling goods ready made up in packets which are not weighed in the presence of the purchaser is nowadays very general, and it is increasing. In such cases the purchase is made and effected without scales, weights, or measures entering into the transaction. The Weights and Measures Acts therefore do not apply, and consequently the inspector of weights and measures has no standing. If an unprincipled dealer wishes to defraud his customers in the matter of weight let him weigh up his commodities in packets in some part of his premises not readily accessible to the inspector, or, better still, after business hours. Then he can play the game to his heart's content, and though the inspector of weights and measures stand on his doorstep all day long he can regard him with a smile at once childlike and bland. Do not let him go so far as to have printed on the packages which they are supposed to contain, for the sake of someone may invoke the powers of the Merchandise Marks Acts against him. But now let us suppose that scales and weights enter into the transaction. A person goes into a shop and asks for a pound of butter, and it is weighed in his presence. An inspector meets that person coming out of the shop, takes the butter back, weighs it, and finds it under weight. Assuming that the scales and weights are correct, has the inspector any ground for action? He may proceed under Section 26 for wilfully committing a fraud in the use of scales. To prove the short weight is a very simple matter, but to prove *wilful* intent is a very difficult matter. During the last five years 153 prosecutions have been instituted in Birmingham under the Weights and Measures Acts, and of that number only one has been taken under Section 26; and this, I think, fairly represents what obtains in other parts of the country. You will therefore see that Section 26 is practically of little value in securing to the purchaser just weight or measure. I doubt if there is another European country where the law in this respect is so lax. It is otherwise in France and Germany. Even the Isle of Man is ahead of us. There is a section in the Manx Weights and Measures Act which says, "any person who sells any goods or any article or things whatsoever, and delivers to the purchaser as and for any particular weight or measure a quantity less than such weight or measure, shall be liable to a fine not exceeding five pounds." Something of this sort is wanted here, and until a clause of this character is added to the Statute-book the prime function of the inspector of weights and measures will be most inadequately fulfilled. I must point out that there are two exceptions to this general incident, viz., the sale of coal and the sale of bread. If the coal dealer delivers or causes to be delivered less coal than was agreed to be sold, he is liable to be prosecuted; and the baker is bound by law to sell his bread by weight. Why these two commodities are thus singled out I fail to comprehend. As has already been said, just weight and measure as between buyer and seller is a matter which concerns not only the public—it concerns very materially the vast majority of traders in this country, whose one desire is that nothing shall be done but that which was fair and right. Let this question of short weight and measure be settled, and we shall then hear no more of reputable firms being summoned for weighing paper with tea—a practice which is being carried on at the present moment throughout the length and breadth of the land; nor of a farmer here and there being prosecuted for using an unstamped churn; nor of one or two brewers being visited with the pains and penalties of the law for using unstamped beer barrels, while there are thousands upon thousands of these vessels in use which bear no official mark of verification. If this powerful Federation will take up this question and see it through, the action can but redound to its credit and honour, for it will thus confer a real benefit, not only upon its members, but also upon the public at large.

ALLEGED UNSOUND MEAT AT MERTHYR.

At the meeting of the Merthyr Urban District Council on Aug. 16th it was reported that Mr. Owen, the sanitary inspector, had seized at the Great Western Railway Station 140lb. of meat consigned to Messrs. Eastman and Co., which had been condemned and destroyed as unfit for food. Mr. F. S. Simon, solicitor, had written stating that the inspector had exceeded his duty, and inquiring by what authority the seizure had been made. The Clerk having advised that Mr. Owen was perfectly within his rights in what he had done, the council directed that a reply to that effect should be sent to Mr. Simons. A discussion took place as to whether proceedings should be taken against Messrs. Eastman and Co., and eventually the question was decided in the negative.

THE VIRTUES OF THE TOMATO.

Recent investigations go to show that the tomato possesses very considerable medicinal virtue. As a blood tonic the juice of the tomato has been found productive of excellent results. During the recent war with Spain the Americans largely used an extract of tomatoes as a health preservative among certain sections of their troops. The use of the tomato in this connection was the outcome of some experiments specially made for the purpose under the authority of the United States Government.

PRACTICAL PREVENTION OF CRUELTY TO ANIMALS.

THERE is nothing in which England differs more from its Continental neighbours than in the treatment of dumb animals. One has but to contrast the shouting, gesticulating brute who drives a Paris cab and whose long lash is never off the suffering horses back for more than a few seconds with the deft driver of a London 'bus or hansom whose whip if seen in evidence to the tithe of the extent so common abroad, would secure its brutal wielder a thrashing by some indignant onlooker, or prompt arrest by the police, to realise that hard as are the tasks which fall on that noble animal, the horse, brutality in England seldom accompanies the toil. But evil is wrought by want of thought, as well as want of heart, and it is gratifying to see increasing evidences of consideration for dumb animals. In a recent number of *Punch*, a clever artist raised a good humoured laugh by depicting a mare asking a friend, "Is my bonnet on straight, dear?"

Horses in bonnets certainly look odd and their appearance provokes a smile, but we hope soon to see them as common in tropical weather such as we have been enjoying, as they are now uncommon. Those who have seen the poor animals with heads exposed to the blinding sun dragging heavy loads and falling down exhausted and overpowered by the heat, as has been so often witnessed in London during the past few weeks, can easily realise what relief the sun bonnet must be. Mr. Alfred Bird of custard powder fame is the pioneer of sun bonnets for horses in hot weather, and the animals horsing his vans have been seen about London during the past few weeks looking very comfortable, and if they could speak, no doubt feeling very grateful to their considerate owner. We hope to see Mr. Bird's good example followed by all our large team owners, omnibus companies and cab-owners. It may look odd, but its odd appearance is out-weighed by its humanitarianism.

SHELL-FISH AND TYPHOID FEVER.

At the meeting of the East Kerrier Rural District Council (Cornwall) held on August 5th, the medical officer of health reported that he had traced a case of typhoid fever to the patient having eaten cockles gathered from the mud of Penryn river. Last year he had traced three cases to the same cause.

A CORPORATION BECOME SELLERS OF INFANTS' FOOD.

THE St. Helens Corporation have opened an Infants' Milk Depôt for the sale of sterilized and humanized milk for babies. The milk, which is mixed with cream, sugar, water, and salt, is placed in bottles with air-tight stoppers. To destroy any disease germs that may be present, the bottles of milk are placed to the sterilizer (of Parisian make), which heats the bottles to 109 degrees, steam from a small boiler ascending through perforated platforms. It is declared that no microbes can exist ten minutes in the temperature thus created. The medical officer has prepared a table of quantities to suit babies of different ages. The Corporation expect that the business will pay, besides saving child life.

GOLDEN SYRUP.

DR. BERNARD DYER, the public analyst for Wiltshire, in his quarterly report states that fifteen of the samples he analysed consisted of golden syrup, in which glucose syrup was present in proportions varying from 10 per cent. to 73 per cent. He says it is a common practice in the manufacture of golden syrup to add a small proportion of glucose syrup for the purpose of keeping the syrup clear and uncrystallised; and, although it is possible to manufacture golden syrup that will keep clear without such addition, the practise of adding a small proportion of glucose syrup for this special purpose, is so frequent in the trade, that it would be scarcely fair to regard a comparatively small proportion as an adulteration. In eight samples examined, glucose syrup formed at least 70 per cent. of the mixture, in one case at least 60 per cent., and in another at least 50 per cent. In the case of a brand containing 70 per cent. of glucose syrup, the tin bore a printed label stating that its contents were of "finest quality, made from pure cane." In this case, in addition to a prosecution of the retail vendor, proceedings were taken under the Merchandise Marks Act against the wholesale dealer or packer of the goods who supplied the shop, with the result of a conviction and the infliction of a penalty of £10 and £10 10s. costs.

A CO-OPERATIVE SOCIETY AND ITS BUTTER.

In his last report Mr. B. Scott Elder, Chief Inspector to the Durham County Council says:

An important and, in my experience, most unexampled, case of wholesale adulteration of butter has been brought to light during the past quarter. It came to my knowledge that certain casks of margarine were tampered with at a certain goods station, that the labels bearing the word "Margarine" had been deliberately removed, that these casks were about to be sent to a certain large Co-operative Society, and that the contents were to be sold as butter. I was able to ascertain the exact trade description upon, and the number of, the casks in question, and with the assistance of the Bishop Auckland Inspector, a sample of this identical "Butter" was obtained, and when analysed was certified to contain only 9.76 per cent. of butter fat, and 77.89 per cent. of foreign fat, although sold at the best market price of 1s. 2d. per lb. I instituted proceedings against the Co-operative Society, which, after a lengthy hearing, resulted in a penalty of £5 and costs. I also prosecuted the wholesale dealer under a very rarely used provision of the Margarine Act, and previous to the hearing of the case he voluntarily attended at my office and made a statement admitting the offence, and giving me notice of his intention to plead guilty. The Magistrates inflicted the full penalty of £20 and costs, and, on my application, consented to a portion of the penalty, £5, being paid to the person, who had, by information and in other ways, assisted me in tracing this extraordinary deception. Although the full penalty for a first offence was inflicted, it is a mere trifle when compared with the illicit profits.

I have to report, and I do so with some regret, that I received letters from several merchants, and that several other gentlemen, probably without due consideration, sought interviews with me to bear testimony to the uprightness and integrity of some of the persons connected with these cases. I am always willing to hear, and construe charitably, anything which interested persons may desire to bring under my notice, but I think outside interference is in every way undesirable. I am pleased to report, however, that such interference—well meaning no doubt—is of very rare occurrence.

THE FERRUGINOUS WINE SWINDLE.

A RECENT analysis by Mr. J. Carter Bell, public analyst for the county of Chester, discloses how the public are misled by untrue advertisements.

A sample of wine says Mr. Bell, was submitted to me for analysis, as it was bought on the understanding that it contained a considerable quantity of iron, the wine being called "Ferruginous." The following is the analysis:—

Proof Spirit	...	...	24.2 per cent.
Extract or Total Solids	...	3.2	"
Mineral Matter or Ash	...	.33	"
Ash soluble in Water	...	87.96	"
Do. insoluble	...	12.04	"
Per cent. of Iron in Wine	...	.0001	"

This quantity of iron, .0001, or one part in one million of wine, is practically speaking, nothing; for one would have to drink 100 bottles of wine to obtain one grain of iron. A person would consume more than this in eating a 4lb. loaf. The amount of iron in the wine being so infinitesimally small. I thought it possible that there might be some error in the sample. To guard against this, I considered it would be wise to purchase a sample myself, which I did at a local wine merchant's. He assured me that the wine contained a considerable amount of iron. On analysing this new sample, it corresponded with the first.

In the above two instances a distinct attempt is made to mislead the purchaser, and such misleading designations should call for thorough repression, as provided by the Food and Drugs Act.

A WART OINTMENT.

In his last quarterly report Mr. Carter Bell gives the analysis of a noted remedy for warts. Mr. Bell says:—A sample of ointment was sent by one of the Inspectors of an Urban District Council. It was said to be a most valuable remedy for curing warts, as it contained a large percentage of Nitrate of Silver. I was desired to report upon this sample. The following is the analysis:—

Water	...	...	11.95
Oil	...	...	3.45
Sulphur	...	...	81.80
Oxide of Iron, Lime, &c.	...	...	2.80

There was not a trace of silver in the compound. My report was that it would do no harm and about as much good.

COTTON-SEED OIL AS FOOD.

BECAUSE cotton-seed oil has been employed by unscrupulous persons as an adulterant of olive oil and butter a certain amount of prejudice has been entertained against it as an element in dietetics, says the *Lancet*. The case, however, with which cotton-seed oil saponifies would indicate it to be a useful food and an excellent substitute for more familiar fats. Indeed, there is some evidence in favour of the view that properly refined cotton-seed oil is as wholesome as butter. However wholesome and nutritious, though, cotton-seed oil may be it should be sold under its right name and should not be allowed to masquerade under titles to which it has not the slightest claim. The

late Dr. Campbell Morfit devoted considerable attention to the purity of cotton-seed oil for edible and pharmaceutical purposes. Some important observations connected with his researches in this direction have recently been communicated to us in a paper by his daughter. In this paper it is stated that the exceptional capacity for assimilation which cotton-seed oil possesses when chemically pure can be demonstrated by five years' experience of its use in severe chronic dyspepsia. Where the diet was strictly limited and the stomach was intolerant of any other fat, even of butter, the daily consumption of a small quantity of cotton-seed oil produced results unattainable, it is said, from any other food. Further, cotton-seed oil is much less nauseating than cod-liver oil, while it is free from laxative tendencies, so that it may be exhibited as in the case of tuberculous patients where excessive waste has to be combated without over-taxing the digestive functions. It has been suggested as a suitable food for growing children and as a lubricant in massage treatment. It would appear, however, that cotton-seed oil which has been refined by drastic bleaching agents loses many of its useful qualities. On the other hand, by employing such refining agents as will act upon the impurities solely leaving the oil itself chemically untouched a bright golden oil is obtained possessing a sweet nutty flavour and evincing no liability to become rancid. Such an oil is well adapted for edible and culinary purposes, and since the output of the oil in many parts of the world is enormous it is surprising that the claims of cotton-seed oil as food have not previously been more widely made known.

THE FOOD PRESERVATIVE DANGER.

REFERRING to the fact that for some time past the dangers of the use of antiseptics in the preservation of food have been increasingly apparent, and that boric acid, salicylic acid, and many other chemicals of a more or less potent nature have been discovered in food-stuffs of various kinds, and have in several instances formed the subject of prosecutions, the *Medical Press* remarks that it can hardly be said that the judicial attitude with regard to this form of adulteration has been yet clearly and authoritatively defined. The scientific knowledge of the agency of bacteria in putrefaction is of recent growth, and the subsequent practical applications of the newly-born science have, in many instances, introduced into the ethical life of the community problems that await a satisfactory solution. So far as the addition of chemical preservatives is concerned the greatest offenders have hitherto been the milk and the butter man. As a general rule the drug chosen for their purpose is comparatively harmless, but a report comes from New York of the use of a deadly poison, arsenic. The fact was brought to light by the poisoning, in Brooklyn, of nine persons, two of whom are not expected to live. The occurrence was traced to milk, an analysis of which revealed the presence of arsenic. As the outcome of further investigation the dairyman confessed that he used the poison systematically in order to keep the milk sweet. Medical men generally, observes our contemporary, will do well to bear in mind the fact that some cases of obscure illness may be due to food preservatives. If the milk man is going to embark in a wholesale round of chemical experimentation, the community will find a fresh terror added to their daily life.

OLIVE OIL.

WRITING from Taranto, Italy, Vice-Consul the Hon. W. G. Thesiger reports as follows:—In 1897 out of a total of 1300 tons of oil shipped at this port over 1100 tons went to Russia, whereas in 1898, owing to the complete failure of the olive crop, only 311 tons of oil were exported altogether, Malta taking 74 tons as compared with 80 tons for the previous year. New markets were found for the

inferior oil (which is extracted from the olive grounds by means of sulphuric acid) in Turkey, Egypt, and Tripoli. It is perhaps worth noticing as regards this last quality of oil, which is much used in the manufacture of soap, that the demand as also the supply seem to be gradually falling off. The demand, because chemistry has brought into use other and cheaper equivalents, and the supply because, with the now almost general introduction of hydraulic presses in the place of the old hand-worked machine, so little oil is left in the grounds, that the process of extracting it is fast becoming unprofitable. This introduction of machinery also affects very considerably the general characteristics of the oil produced in this province. Under the old system three or more distinct qualities of oil were produced, the olives being passed and repassed several times through the presses, each time producing an oil of lesser quality. When no more oil could be extracted in this way, the "sansa" or grounds were treated with sulphuric acid to produce the inferior oil which is mentioned. The introduction of the hydraulic press, however, does away with these distinctive grades, a larger quantity of oil is produced, but the quality, taken as a whole, deteriorates, and the higher class of eating oil can only be obtained by repeated filtration. Though the oil produced in this way is excellent in colour and appearance, after continual straining it loses much of its flavour and lacks the fruity taste which distinguished the best oil produced by the old method of extraction. Besides the deficient production for the past year, which resulted in no oil being exported either to France or Russia, prices remained very low, owing to the strong competition of oil from the Levant and Spain, so that as regards the olive industry the past year will be remembered as one of exceptional badness.

A TRADE VIEW OF THE LAW ON UNSOUND FOOD.

"CERTAINLY if the law as it stands were to be enforced, any Monday morning during the hot weather it would not be difficult to make criminals of some five thousand butchers, besides other purveyors. Perhaps we ought to mention that, as a rule, the authorities take a sensible view of the question, and inspectors generally do their duties with discretion. But the trade ought not to be at the mercy of those who possibly might be vindictive, ignorant, or unjust. Perhaps the recent seizures of fruit may bring this question before the public, more especially as one victim of the hot weather is committed for trial. If it had been a cool morning he would not now be in the unpleasant position of having to answer to a criminal charge, but we have yet to learn why misfortune should be punished."—*Meat Trades Journal*.

EXCESS WATER IN BREAD.

CONSIDERABLE attention has been given to the subject to prevent milk-sellers and dealers in alcoholic beverages from supplying their articles with too large a proportion of water in them, but no action has been taken in regard to bread. It is stated that in many loaves which were examined lately in Sydney the percentage of water was from 43 to 45½ per cent., whilst the maximum percentage should be about 35 per cent. In the former figures the solids fall as low as 54½ per cent., it is held that the purchaser is deprived to the extent of 12 per cent. of the nutriment he paid for. The medical officer points out that the use of too much water means, amongst several other things, that bread does not keep; it becomes sour and mouldy, and is especially injurious when given to children. We do not see why excess water in bread should be allowed in England any more than excess water in butter.

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Food and Sanitation.

SATURDAY, SEPTEMBER 9, 1899.

A LONDON MAGISTRATE ENCOURAGES DRUG ADULTERATION.

WE have recorded many surprising decisions, but we doubt if any of the vagaries of magistrates has equalled that of Mr. Rose at West London, on September 2nd.

If there be a thing in which adulteration or inaccuracy is dangerous to the public it is in medicine, and it discloses an amazing incapacity when a magistrate not only fails to realise his obvious duty to protect the public from care-

lessness in making up prescriptions, but censures and fines the local authority for endeavouring to secure accuracy of dosage and purity of drugs.

Surely Mr. Rose ought to possess sufficient intelligence to know that inaccuracy in dispensing may cause death. It would be a serious thing for the public if other magistrates took so foolish a view of their duty as Mr. Rose has done. The facts are as follows:

Mr. Blanco White, solicitor to the Fulham Vestry, attended at the West London court to support summonses against the following chemists: Charles William Andrew, 781, Fulham-road; William Fletcher Barrett, 123, Wandsworth Bridge-road; Keith Longstaff, 811, Fulham-road; and William Arthur Shepherd, 4, Greyhound-road, Fulham, for selling a compound drug not composed of ingredients in accordance with the demand of the purchaser.

Mr. Blanco White explained that the proceedings have been taken under the seventh section of the Food and Drugs Act. In order, he said, to test the accuracy of preparations made up by chemists, Dr. Jackson, the Medical Officer of Health for Fulham, wrote out prescriptions and had them made up by the defendants. He pointed out the necessity that doctors' prescriptions should be accurately dispensed, for the reason that the lives of patients might be imperilled if the doctors' requirements were not perfectly performed.

The summons against Mr. Andrew was taken first, and Mr. H. T. Waddy appeared on his behalf. The sample of medicine prepared by him contained, according to the analysis of the Vestry's analyst, Mr. Cecil H. Cribb, 258 grains of iodide potassium in six ounces of mixture, whereas the prescription required 240 grains, showing an excess of 18 grains.

Dr. Jackson, the Medical Officer, was questioned concerning the nature of his prescription. He said the mixture contained twenty-four doses, and in each there would be an excess of three-quarters of a grain of iodide potassium. Twenty grains would be an exceptional dose, but he would not anticipate serious consequences from it.

In the interests of the defendant, Professor John Attfield, F.R.S., was called, and gave the result of his analysis of a portion of the same mixture which was submitted to him. He could only find an excess of two grains above the 240 ordered by the prescription. Witness was unable to give any decided opinion as to what rule of procedure guided Mr. Cribb in arriving at his decision.

Mr. Andrew, the defendant, was allowed to enter the witness-box to state that he knew the prescription was that of Dr. Jackson, and he used, as he always did, the greatest care and accuracy in its preparation.

Mr. Rose observed that he had the greatest doubt whether the Food and Drugs Act was meant to be applied to a case of this nature. The Act, he thought, was intended to deal with frauds, and had no relation to a trifling excess of an ingredient in a bottle of medicine.

Moreover, it would not be supposed that the Act intended to enforce absolute exactness of a prescription.

Mr. Blauco White argued that the Act contemplated such a contingency, and asked for an analysis by the Somerset House authorities, but his worship refused, remarking that if the analysis did take place, it would not debar him from considering the opinion of Professor Attfield.

Replying to the other contention, Mr. Rose pointed out that it could not have been the intention of the Legislature to deal with a man's own loss in putting a little more than he need to in an ingredient.

The summons against Mr. Shepherd was withdrawn, Mr. Rose allowing him £3 3s. cost.

In the public interest some action should be taken to protest against so foolish and dangerous an encouragement to drug adulteration and inaccurate dispensing.

WEIGHING PAPER WITH TEA.

The World's Tea Company Convicted.

At Kingston Borough Bench, on August 30th, the World's Tea Company were summoned at the instance of the Surrey County Council for applying to a quarter-pound and a half-pound of tea a false description, with intent to defraud, the proceedings being instituted under the Merchandise Marks Act—Mr. T. W. Weeding, deputy clerk to the Surrey County Council, appeared to prosecute; and Mr. Bodkin defended. Mr. R. A. Houghton, an inspector under the Food and Drugs Act, deposed to visiting the Kingston Branch of the World's Tea Company, and to purchasing a quarter, and a half-pound of eighteen-penny tea. The tea was done up in wrappers, on each of which "1s. 6d. per pound" was printed. When he weighed the packets, he found the quarter-pound to be three drachms and twenty-three grains short without the paper, and the half-pound was found to be deficient to the extent of three drachms, 12 grains. By Mr. Bodkin: It was the practice of the World's Tea Company to weigh their tea in the paper; but the public expected to receive half-a-pound when they asked for it. Mr. Bodkin addressing the magistrates for the defence, said the World's Tea Company had adopted the common practice of weighing their goods in the paper in which they were sold. The Bench fined the defendant company £5 and costs. On the application of Mr. Bodkin, the magistrates consented to state a case.

WATER AT SPIRIT PRICE.

In Aberdeen Sheriff Court on August 29th, Acting Sheriff-Substitute J. C. Dove Wilson on the bench. William Wood, innkeeper, Newmachar, was charged with having, on 12th inst., by the hand of Robert Mitchell, 39, Nellfield Place, Aberdeen, his servant, sold and delivered to John Adams, police inspector, Aberdeen, to his prejudice, "an article of food, namely, two gills of whiskey," which was not of the nature, substance, or quality of the article demanded, in respect that it was reduced 29·2 per cent. under proof, or 4·2 per cent. under the minimum fixed by the Food and Drugs Act. He pleaded guilty. Mr. W. S. Foggo, solicitor, who appeared on his behalf, said Mr. Wood had been in weak health for some time, and personally unable to attend to the business, which was managed by his wife and man-servant. Mr. Wood had pleaded guilty, but the circumstances in which the weak whiskey came to be sold were that a large quantity of liquor arrived on the day in question, and Mrs. Wood put some whiskey into a "greybeard" jar in the bar, which she thought contained whiskey ready for sale. It seemed, however, that the liquor in the jar had been

used in the process of mixing, but was not intended for sale. The Sheriff said an offence of this kind was very easily committed, and difficult to detect. It was a source of considerable profit to people who carried on the practice, and it could not be allowed. Accused would be fined £3, with the alternative of seven days' imprisonment.

At Ampthill, on August 31st, John Palmer Gray, innkeeper, of Silsoe, was charged with unlawfully selling a quantity of whiskey not of the nature, substance and quality demanded, to wit, 33 degrees under proof, on August 7th. Mr. Mitchell defended, and, on behalf of the defendant, pleaded guilty. Inspector Mason stated the facts of the case. Mr. Mitchell said that defendant had an occasional licence to sell in Wrest Park on the fete day, and his booth was under the charge of Miss Welsh, to whom defendant had sent a bottle half-full of whiskey, which she diluted a trifle more than she could legally do. To dilute whiskey properly was very difficult, and to prove this he put in a table which gave the necessary statistics. He also proved that the lady was but a fraction out. There was no attempt at fraudulent practice, and he asked the Bench to dismiss this case also on payment of costs. Miss Kate Welsh corroborated. She said that when she received the whiskey, the bottle was half full, and she diluted it till it was three-quarters full. Superintendent James said that Gray was the defendant in a similar case in 1894. The Bench fined defendant, 10s., with £1 0s. 6d. costs.

The landlord of the Grapes Inn, Dalton, Joseph A. Flintham, was charged at the Rotherham West Riding Police Court, on September 4th, with selling adulterated whiskey on July 28th. Mr. Wilson, one of the inspectors employed by the West Riding County Council, proved the case, and handed in a certificate from the County Analyst. Half a pint of whiskey had been purchased, and it was 35·2 per cent. under proof, and contained an excess of 13·6 per cent. of water over the quantity usually allowed. Mr. Gichard, who defended, explained that the defendant had been away from home, and a mistake had been made by the barman, who added more water than he had received instructions to do.—Defendant was fined 20s. and costs.

ADULTERATED SEIDLITZ POWDERS.

At Loughborough Petty Sessions, Richard Parsons, chemist, of Shepshed, was summoned for an offence under the Food and Drugs Act, by selling seidlitz powders not of the nature and quality demanded. Deputy Chief Constable Smith stated that he purchased a dozen seidlitz powders from the defendant on July 18th, for which he paid 11d., and after dividing the purchase in the usual manner, sent one-third of the packages to the public analyst. On August 11th, the certificate of the analysis was received, showing that the powders were adulterated with 12 per cent. of alum. They were stated to be injurious to health, the powders not having been prepared in accordance with the British Pharmacopœa. Mr. Deane, jun., appeared for the defendant, and pleaded guilty. The powders were not made up by the defendant, who had them from a wholesale dealer, and they were labelled as genuine. William Stevenson, druggist, Shepshed, was charged with a similar offence. Deputy Chief Constable Smith said he purchased a dozen seidlitz powders, by agent, from the defendant, for which he paid 8d. The usual formula was gone through with regard to the having the powders analysed with a similar result to foregoing case. Deputy Chief Constable Smith said he had been instructed to ask, on conviction, for the analyst's fee in each case. Defendants were each fined £1, with a half-a-guinea extra in each case to cover the analyst's fee.

THE MANCHESTER SELF-RAISING FLOUR CASE.

At the Manchester County Police Court, on August 31, before Mr. J. M. Yates, Q.C. (Stipendiary), the case of the County Police Authorities against Annie Moffit was

mentioned for the third time. The defendant carries on business as a grocer and provision dealer, in Tamworth-street, Stretford, and she was summoned for selling one pound of flour, which contained, it was alleged, ingredients injurious to health, on the 31st of May last, at Stretford. When the case was before the court on the last occasion it was stated that the summons was taken out under Section 3 of the Food and Drugs Act, 1875. On the date in question, Inspector Jones, of the County Constabulary, visited the defendant's shop, and asked for one pound of self-raising flour, and it was supplied to him on payment of twopence. A sample of this flour was then sent to the county analyst, at Liverpool (Dr. Campbell Brown), who after analysing it certified that the flour contained 170 grains of alum, 140 grains of bicarbonate of soda, and 66½ grains of salt per lb. of wheat flour. The public analyst in his observations, further said: "No change has taken place in the constitution of the sample that would interfere with the analysis. Alum is an astringent drug, of which the maximum dose is ten grains. In food it is injurious to health, whether mixed with bicarbonate of soda or not. The quantity present in this sample is excessively large, but its use in self-raising flour is quite unnecessary and very unusual." At this hearing, in accordance with the request of the defendant, the case was adjourned *sine die* in order that a sample of the flour should be sent to Somerset House for analysis. The result of this analysis was read by Mr. Yates on Friday, and it showed that the sample was free from alum. It was agreed that the case should be tried in a few weeks. Mr. Chapman again appeared on behalf of the police, and the defendant was represented by Mr. A. E. G. Chorlton. Mr. Chapman, in the course of his opening statement, said no doubt the Bench would remember this case, which was rather an important one. Some time ago a grocer and provision dealer, named Moffit, who carries on business in Tamworth-street, Stretford, was charged on a summons with selling adulterated aerated flour. A sample was sent to Somerset House, and the result of the analysis was that the flour in question was free from any alum. The application he was going to make was that the residue of a sample of flour now in the possession of the County Analyst be also sent up to Somerset House, and that the further hearing of the case be adjourned until the result of the analysis. Mr. Chapman then went on to explain the facts of the case as stated above. He wished also to inform the Bench that the costs of the case would be paid for by the county. It was in the interests of the public and the trade generally that he was making this application. Mr. Chorlton was about to address the Bench in opposition to the application, when the Stipendiary said he did not think it was a case in which they could take any further action. The facts were very simple. The flour in question was purchased by the police, and divided into three parts, one being sent to the county analyst, one to the defendant, and the third was retained by the police. There was a dispute between the chemists for the defence and the county analyst as to whether there was any alum in the flour. The Bench thereupon directed that a portion of the sample in the possession of the police should be sent to Somerset House for analysis by the Government chemists. That was done, and the certificate was in agreement with that of the defendant's analyst—that there was no alum present. He (the Stipendiary) could not carry it any further. If the county analyst wished to make further tests he had better take a fresh sample and try again. He would then have to make a fresh application. This application was refused.

MARGARINE AS BUTTER.

At Snaith Police Court, on August 31, a grocer named Frank Arthur Wilson, of Hensall, was charged with having sold an admixture containing only 60 per cent. of real butter and 40 per cent. of margarine. Inspector Wilson proved to going in the defendant's shop on August 14th and purchasing 1 lb. of butter, which he divided into

samples, one of which he sent to an analyst. Defendant had sent a copy of the invoice he had received with the butter, stating that the butter was pure. It had been purchased from R. T. Bachwell, trading as the Danish Dairy Butter Company, at Spencer-street Hall. The Chairman of the Bench said it was hard on the defendant that they were bound to fine him, and the costs were heavy. He should advise defendant to seek redress from the dealers from whom he purchased the butter. He would be fined 2s. 6d. and costs, or in all £1 2s. 8d. in the first case, and he would also have to pay the cost (£1) of the summons, which was withdrawn.

At Bolton Police Court, on August 31, John Griffiths, described as a wholesale provision dealer, and his wife, Mary Griffiths, 223, Spa-road, were summoned on a charge of not delivering margarine to the purchaser in a wrapper on which was printed the word "Margarine" in letters of the requisite size. The Deputy Town Clerk (Mr. Field) prosecuted, and stated that John Griffiths (whose case would be gone into first) carried on business at a shop in Derby-street known as the Pioneer Stores. An inspector sent a lad into this shop on August 4th to buy ½ lb. of best butter. The lad paid 5d. for the purchase. The article was not wrapped in paper properly stamped according to the Act. The analysis showed foreign fats to the extent of 68 per cent. The Deputy Town Clerk added that there had been upwards of twenty-five convictions in the district for similar offences during the last six months, and that he hoped the Bench would inflict penalties sufficient to show the business was not a profitable one. Evidence having been called, Mr. Horridge (solicitor) held that there was no case against the defendant, inasmuch as he was neither the owner nor tenant of the shop. He was afraid the prosecution was straining against John Griffiths because of a former conviction. Mrs. Griffiths was thereupon called, and deposed that the business was hers, and that she held a banking account. The magistrates then dismissed the case against the male defendant, and, an offence having been admitted, Mary Griffiths was fined 40s. and costs.

At Mistley, on August 28, Rose Ward, shopkeeper, of Mistley, was summoned for exposing margarine for sale by retail without being properly labelled, in accordance with the requirements of the Food and Drugs Act. Sergeant Bridge said he ordered some shilling butter, and when the defendant was about to get it she suddenly hesitated at the shelf and said she had sold the last piece of butter she had—she had only margarine left. Witness remarked, "Margarine! But you have not got it labelled." Mrs. Ward said the labels were near by, but she admitted they were not conspicuously exhibited. The Chairman said he thought Mrs. Ward had no intention of defrauding, but she had broken the law, which was made for the protection of the public. They would reduce the penalty of £20 to 10s., and would remit the costs.

SWEET NITRE AND CAMPHORATED OIL.

At Ingleton, on September 1, Joseph Thornton, manager of the Ingleton Co-operative Society, was fined 20s. and costs £1 14s. 1d., for selling sweet spirits of nitre to Inspector Randersen on July 22nd, the same containing an excess of 1.12 of water, and only a trace of nitrous ether, instead of 1¼ per cent.—Edmund Jackson, Burton-in-Lonsdale, was fined 10s. and costs £1 13s. 7d., for selling camphorated oil, which contained 13 per cent. of camphor, instead of 21 per cent. The defendant said he sold it just as he bought it, and he had returned all his stock to the wholesale dealer.

SWEET SPIRITS OF NITRE.

At Swadlincote Petty Sessions, Lucy Staley, grocer, Church Gresley, pleaded guilty to selling four ounces of sweet nitre utterly devoid of nitrous ether, on June 16th. Captain H. Stair Sandys, inspector under the Food and

Drugs Act, stated that retailers should insist upon a warranty when purchasing from wholesale dealers. She was fined £1, including costs.

At Amptill, on August 31, Herbert Hall, grocer, Cranfield, was charged with unlawfully selling to George Mason, an Inspector under the Food and Drugs Act, a quantity of sweet spirit of nitre not of the substance and quality demanded. Dr. W. E. Bottrill, solicitor, Nottingham, appeared for the defence. Inspector Mason said he bought three bottles of sweet spirit of nitre at Mr. Hall's shop, telling him that he wanted them so that he could have them analysed. He sealed all three, gave one back to Mr. Hall, sent one to the analyst, and the other he kept at home. After the sample came back from the analyst, the present proceedings were instituted. Dr. Bottrill said that the nitre was made by Boots, Ltd., about the end of last February. Mr. Hall bought it from Mr. Smith, the manager of Boots' shop in St. Mary's, Bedford, on May 3. After explaining the use to which it was put, he said that nitre was very volatile, and had to be kept in a dark, cool place. Mr. Hall was not a chemist, and in some way let the sun get at the spirit, with the result that the quality was impaired. The nitre was sold in pennyworths, defendant's sale being about 5s. worth a year. He would point out that the prosecution did not accuse defendants of fraudulently tampering with the spirit, and asked the Bench to allow the withdrawal of the summons on payment of the costs. The Bench agreed to this course. The costs amounted to £1 0s. 6d.

DEMERARA SUGAR.

At Merthyr Police Court on August 31, William Jones, grocer, Dowlais, was summoned for having sold to Inspector Cooke a substance which he represented as Demerara sugar, but which, on being analysed, was found to consist of dyed crystals. Mr. Charles said the offence was alleged to have been committed on July 27. The Bench consented to an adjournment.

PULBICIANS SWINDLING.

Dilution Notice Abolished at Worthing.

SUPERINTENDENT BRIDGER has succeeded in abolishing the exhibition of dilution notices at Worthing. In his report to the licensing magistrates on August 30th, he was able to announce that no notices stating the spirits were diluted were now exhibited in any licensed house in the division, and he had therefore no objection to make to renewals of licenses.

As the police have it in their power to suppress the barefaced fraud upon the public practiced by those who exhibit such notices, we hope to see a great many more places following the example set at Worthing by Superintendent Bridger.

THE GOVERNMENT LABORATORY.

THE report of Professor Thorpe, principal chemist of the Government Laboratory, for the year ended March 31, 1899, states that the total number of analyses and examinations made during the year for the Customs Department was 8418, and for Excise 66,423. The report shows that during the year fifty-seven samples of tea, representing 1616 packages, were examined and were found to contain exhausted leaves or to be mixed with other substances within the meaning of the Act, and were therefore refused admission for home consumption or were forfeited and destroyed or otherwise disposed of as being unfit for human food.

The Treasury having approved of the continuance of the sampling by the Customs of butters from abroad, 1083 samples have been examined, of which only two were reported adulterated. This is a marked improvement on previous years, for not only has the number of adulterated samples rapidly diminished year by year, but the analytical results show a distinct improvement in the quality of those reported genuine. The following table shows a comparison

of the results of examination of the butter samples received during the past three years:—

Country.	1896-97.			1897-98.			1898-99.		
	Total.	Adulterated.	Doubtful.	Total.	Adulterated.	Doubtful.	Total.	Adulterated.	Doubtful.
Holland ...	349	11	8	231	1	...	227	2	...
Denmark ...	89	...	7	108	...	6	97	...	...
Germany ...	172	32	23	144	20	1	111	...	...
Norway & Sweden ...	113	2	2	137	...	1	141	...	...
France ...	56	...	...	138	...	...	145	...	...
Belgium ...	18	...	...	5	...	...	8	...	...
Russia ...	46	...	2	57	4	1	29	...	...
U.S. of America ...	54	...	...	179	...	2	164	...	...
Canada ...	33	...	...	187	...	...	111	...	...
Australia ...	16	...	...	37	...	...	25	...	...
New Zealand ...	8	...	...	22	...	...	14	...	...
Buenos Ayres ...	6	...	...	26	...	...	9	...	...
Italy ...	2	...	...	...	...	...	...	...	...
Spain ...	1	...	...	...	...	...	...	...	...
Cape Colony ...	...	...	...	...	...	...	2	...	...
Total ...	963	45	42	1271	25	11	1083	2	...

The report proceeds: It will be seen that only two samples were reported as adulterated, against twenty-five last year and forty-six the preceding year. No samples have this year been reported as of doubtful purity, since, although certain samples gave reactions for cotton seed oil, the amount indicated was not more than might be due to feeding on cotton-cake, whilst the other analytical results of these samples were such as to preclude the idea of any admixture of margarine containing cotton seed oil. The results of the investigation made at Wye and in this laboratory last year into the effect of feeding cows upon oil-cakes proved beyond doubt that characteristic constituent of cotton seed oil passes into the milk of cows fed upon cotton-cake.

With regard to the use of boracic preservative in butter, France again heads the list of European countries, Holland comes next, whilst Danish and Scandinavian butters were entirely free from this preservative. The majority of the butters from the more distinct colonies, as Australia and New Zealand, contained boracic preservative.

The use of artificial colouring matters derived from coal tar is now much in vogue, particularly in the United States, and to a less extent in Holland.

The improvement in the quality of butters reported as genuine is specially noticeable in the case of German butters, and is largely due to the action of Mr. Gerlich (Commercial Attaché to the German Embassy in London), who was sent to me by the Board of Agriculture for the purpose of discussing the question of examining German butters intended for the English market before they are shipped from Hamburg. I gave Mr. Gerlich a full account of our system of examination and methods of analysis, and, as a result of his report to the German Government, a large number of Hamburg firms have voluntarily consented to submit their butter before shipment to sampling by the police authorities for analysis by the Health Bureau. The effect has been most satisfactory. Other governments have shown themselves equally alive to the importance of sending the best quality of dairy produce to the English market, and in this connection I have again been in communication with Dr. Stein, chemist to the Danish Government, with regard to samples of Danish butter containing cotton seed oil, which in all cases was traced to the feeding; and (through the Board of Agriculture) with M. Bille (Danish Minister in London) on the subject of boric preservative, the use of which is forbidden in Denmark. I have communicated our methods of analysis of butters to Mr. Werenskiöld (chemist to the Norwegian Government), with a view to facilitating their examination of butters intended for export to England, and have checked the analyses of seventeen

butters previously examined according to our methods by the Norwegian chemist.

IMPORTED MARGARINES.—During the past year we have received from the Customs 123 samples of margarines, as follows :—

	1896-97	1897-98	1898-99
Holland	76	66	98
Germany	19	25	23
Belgium	5	...	1
France ... ..	...	4	...
Norway	1	...	...
Canada ... ..	...	...	1
Total	101	95	123

Many of the above, especially from Holland, consisted of mixtures of margarine and butter in various proportions, though entered as “margarine” in accordance with the Merchandise Marks Act.

German margarines are required by law to contain 10 per cent. of sesame oil as a tell-tale ingredient, *i.e.*, for the purpose of assisting in their identification when mixed with butter, and though some of the earlier samples of German margarine were free from sesame oil, latterly we invariably find this ingredient present.

The great majority of the margarines contained cotton-seed oil, boric preservative, and aniline colouring matters.

IMPORTED CHEESE.—Occasional samples of cheese are taken at the ports by the Customs, for the purpose of checking the entry, as a distinction is required to be made between ordinary cheese and so-called filled-cheese,” the latter being cheese made from skim-milk to which oleo-margarine is added to replace the abstracted butter-fat. Only two such samples from the United States were examined during the past year, and both proved to be genuine whole-milk cheese.

IMPORTED CREAM.—At the instance of the Local Government Board four samples of imported cream, from Holland, Denmark, Norway, and Sweden, were examined and found to be genuine.

The importations of milk by the Normandy Milk Company, which threatened at one time to assume large proportions, and which were referred to in my report of last year, have now entirely ceased, owing to litigation in the French courts, in respect to the so-called “Secret preservatives,” which we found to consist essentially of formalin, a preservative in comon use.

FEEDING EXPERIMENTS.—The experiments referred to above, as to the effect upon milk of feeding cows with cotton-seed cake and sesame oil cake, were in progress when last year’s report was drawn up. Since then the investigation has been completed, and 339 additional samples have been examined, making a total of 451, with the result then anticapted, that it has been placed beyond doubt that the ingredient which gives the characteristic reaction for cotton-seed oil passes through the lacteal glands of cows fed upon cotton-cake and appears in the butter made from the milk of such cows, whilst with the sesame oil cake no such transference of the reacting substances takes place. The importance of this lies in its effect upon the conclusions of chemists as to the adulteration or otherwise of butters showing reactions for vegetable oils which are largely used in the manufacture of margarine, and the investigation was of special value to us in our examination of imported butters and samples referred here by the magistrates under the Food and Drugs Act.

FERTILISER AND FEEDING STUFFS ACT.—One sample of linseed cake has been referred during the year, in consequence of the certificate of the public analyst being called in question by the buyer. The cake proved to be genuine, but contained more than the average amount of sand and earthy matter.

FOOD AND DRUGS BILL.—A considerable amount of attention has been given to the provisions of the new Food and Drugs Bill introduced into the House by the President of the Board of Agriculture. The various proposals and suggestions made upon it by numerous public bodies, agricultural and other associations, and traders and amendments proposed in Committee, have been submitted to me by the Board of Agriculture for criticism or comment, embracing questions concerning imported dairy products; margarine and margarine-cheese; mixtures; the use of preservatives and colouring matter in milk and butter; standards of purity, etc. In connection with question of the admixture of butter with margarine, twenty-six samples were examined for that Board for the purpose of ascertaining the character of mixtures at present upon the market.

REFERENCE SAMPLES UNDER THE FOOD AND DRUGS ACTS.
The following samples have been referred to the by Government Laboratory magistrates, under the terms of the above Acts :—

Milk	47
Butter	9
Coffee	4
Caper Tea	2
Cocoa	1
Ham	1
Cheese	1
Vinegar	1
Preserved peas	2
Ground ginger	2
Whiskey	1
Rum	1
Brandy	1
Gin	1
Total	74

The number of these reference samples has been greater during the last year than for some years past. On the other hand, the number of instances in which we differed from the conclusion of the public analyst is proportionately less than last year. In the case of the forty-seven samples of milk, we disagreed in respect to seven samples—six being cases of alleged watering and one of abstraction of fat. The more serious differences arose in regard to samples of butter and coffee. In nine samples of butter we only confirmed the analyst in four, and in that of four coffees we disagreed in three instances. The alleged adulteration in the butters was margarine; in the samples of coffee it was chicory. In the cases of caper tea, ground ginger, and cheese, our analytical results were in general agreement with those of the public analysts concerned, but we were unable to draw the same conclusions as to the articles being adulterated. We were in agreement with the conclusions of the analysts in respect to the samples of ham (examined for the percentage of boric acid), vinegar, peas (found to contain copper), cocoa, and also in three out of the four samples of spirit alleged to be diluted below the legal limit of strength.

DR. DYCE DUCKWORTH ON BREAD-MAKING.

“In my student days in Edinburgh,” writes Dr. Dyce Duckworth, “I was early taught the importance of adequate bread-making. Scottish bakers are generally regarded as amongst the best and ablest of their class, and but for the resistless influx of German operatives, would continue to hold their own all over the country. On my return to Scotland I am always pained to find that the art has much fallen below its former pre-eminence, and I am told that the public now clamours for raw, uncooked bread, and will have no other. Each time I come back to Campbeltown I have to educate my baker to prepare for my family bread properly fired, and I see that I get it. Not a loaf in any shop in the town would pass my inspection. The mischief which results from this uncooked bread is very serious. In this

as in other cases, an ignorant public has its way, and the unwholesome demand is met by the supply of a half-cooked loaf. One result is plainly obvious, and that is the bad condition of the teeth of all classes. With no hard crusts to chew, no vigour and health for the teeth, no adequate supply of saliva for digestive purposes, hence attendant degrees of indigestion. Artificial teeth, thus rendered necessary, of course increase the demand for raw, crustless bread, and so all works in a vicious circle.

"It is surely sufficient to point out facts like those to intelligent Scotsmen and Scotswomen to secure a change for the better, and to enable the bakers to practise their business as they well know how. Extra firing till the crust of the loaves is almost brown, and three-sixteenths of an inch thick, is what is requisite. This is no 'fad,' or matter of fashion, but a necessity for all time."

Our correspondent has written above the letter a request for our opinion on it. We would much rather that he had sent us his, as the Campbeltown bakers are the best judges.

BUTTER ANALYSES BY THE UNITED STATES GOVERNMENT.

SIR,—The enclosed set of tests may interest your readers. These tests refer to the exhibition at Sioux Falls, U.S.A., and contain valuable particulars of the analysis of the samples shipped by us to the United States Government.

We are, etc., DOWDALL BROTHERS.
Manchester, August 14th.

[Enclosure.]

SAMPLES OF FOREIGN-MADE BUTTER FROM ENGLISH MARKETS EXAMINED IN THE UNITED STATES, 1899.

Percentage, Composition, and Score of Foreign Butters.

Sample No.	Origin of Samples.	Water	Fat	Curd	Ash	Score at Sioux Falls.			
						Flavour,	50	Grain,	25	Total,	100
1...	Denmark ...	13.02	84.02	1.58	1.38	44	25	94	
2...	Do. ...	15.04	82.27	1.33	1.36	41	25	91	
3...	Sweden ...	13.64	83.45	1.65	1.26	42	25	92	
4...	Finland ...	13.08	83.97	1.68	1.27	34	25	83	
5...	Friesland ...	13.49	82.63	1.46	2.42	29½	23½	78½	
6...	Holland ...	12.36	84.51	1.21	1.92	28	23	76	
7...	Denmark ...	15.32	81.18	1.48	2.02	32½	23½	81	
8...	Ireland*	11.54	84.58	1.23	2.65	30	25	80	
9...	Do.*	15.02	80.95	1.68	2.35	24	23	70½	
10...	Do.*	18.42	71.26	1.99	8.33	33	24	80	
11...	Do.*	14.10	84.33	1.06	0.51	28	22	75	
12...	Do.*	13.11	83.59	1.08	2.22	29½	25	77½	
13...	France	15.10	82.94	1.52	0.44†	25½	22	71½	
14...	Australia...	10.06	86.15	1.24	2.55†	30	25	80	
15...	Do.	10.83	85.89	1.10	2.18†	33	25	83	
16...	Argentina	12.15	84.89	1.01	1.95†	25½	25	75½	
17...	New S. Wales...	11.60	84.55	1.41	2.44†	34	25	83	
18...	Do.	12.23	82.93	1.13	3.66†	34	25	84	
19...	New Zealand ...	11.48	86.08	0.81	1.63†	41½	25	91½	
20...	Canada ...	10.35	86.79	1.20	1.66	35	25	85	
21...	Do.	11.50	85.07	1.28	2.15	35	25	85	
22...	Victoria ...	11.92	84.86	1.25	1.97†	34½	25	84½	
23...	United States...	12.96	83.95	1.33	1.76	32½	25	80	
23a	Do.	13.24	82.47	1.09	3.20	32½	25	80½	
24...	Do.	13.55	84.22	0.87	1.36	38	25	85½	
24a	Do.	13.17	84.59	1.00	1.19	37	25	84½	
25...	Ireland ...	12.73	84.00	1.38	1.89†	24	23	72	
26...	Do.	12.50	84.22	1.21	2.07†	22½	23	70½	
27...	England ...	13.54	85.44	0.34	0.68	41½	25	90½	
28...	France,Nrmndy	14.99	83.19	0.68	1.14†	35	24½	84½	
28a	Italy ...	14.89	83.57	1.30	0.24†	40½	25	90½	
29...	Friesland ...	12.34	85.06	1.65	0.95	37½	25	87½	
	Am. Prem. :								
30...	1st prize...	12.46	83.31	1.55	2.68	47	25	97	
31...	2nd prize	10.49	85.68	1.38	2.45	46½	25	96½	
32...	3rd prize	10.66	85.82	1.28	2.24	46½	25	96½	

* Winter-made butters out of season.
† Boracic acid preservatives present.

Signed by HENRY E. ALVORD, Chief of Dairy Division
U.S. Department of Agriculture, Washington, D.C.

IMPROVED PROCESS FOR STANDARDIZING BUTTER.

AN enterprise, says the *Grocers' Review*, is being launched for the acquisition of the exclusive rights in the United Kingdom, of valuable patents for the manufacture, purification, and blending of butter and dairy produce. The process has been in actual working for some time at the factory of the Irish Aerated Butter Company, Limited, Blanchardtown, near Dublin, whose works, machinery, plant, etc., will also be acquired by the new company. The practical working of the patents has been thoroughly (scientifically and commercially) tested by the Irish company—the results being eminently satisfactory. The process has been further examined by leading scientists, analysts, and trade experts, all of whom agree in pronouncing the patents of the utmost commercial value. The success which has attended the introduction of Kiel, Danish, and Normandy butter, is mainly due to the fact that the Continental merchants recognised the necessity of placing in the market a regular supply of mild, sweet butter of uniform quality. With this object in view, the Danish Government provided special facilities for the standardising of butter in large factories throughout the country. The result has been that Denmark has for years past had almost the monopoly of the English butter trade. An equally large measure of success has been achieved by America. By the new process, not alone will uniformity of flavour, colouring, and quality be guaranteed, but what is of vital importance from an hygienic standpoint, all foreign ingredients or impurities are eliminated, and the possibility of bacterial contamination is almost entirely prevented. The company, which will be known as the British Dairy Produce Company, is issued under the auspices of the Globe Trading Company, which includes amongst its directors, representatives of some of the largest and most successful London financial houses.

THE PRESERVATION OF EGGS.

THE results of a series of experiments on the preservation of eggs are published in the *Berliner Markthallen Zeitung*. Fresh eggs were treated by twenty different methods in June, and after being allowed to remain eight months were examined at the end of February. In only three of the methods employed did all the eggs remain sound. These were—(1) covering with vaseline; (2) preserving in lime water; (3) preserving in a solution of silicate of potash. The treatment with vaseline, however, is a tedious business, submersion in lime water induces a disagreeable flavour, and the use of silicate of potash renders the shell extremely brittle, so that it is expedient to pierce it with a needle before putting it into boiling water for cooking. Whichever be the method employed it is desirable that only non-fertile eggs should be subjected to the process of preservation. Twenty per cent. of the eggswent bad that had been—(1) covered with lard; (2) preserved in wood ashes; (3) varnished with shellac; (4) put in a mixture of boric acid and silicate of potash; or (5) treated with permanganate of potash. Of eggs varnished with silicate of potash or with collodium 40 per cent. turned bad. Of eggs that had been plunged for twelve to fifteen seconds in boiling water, or immersed in a solution of alum or in a solution of salicylic acid, 50 per cent. were found to be bad. Of eggs rubbed with salt, or preserved in bran, or covered with paraffin, or treated with a mixture of salicylic acid and glycerine, 70 per cent. went bad. Of eggs wrapped in paper 80 per cent., and of eggs kept in salt water 100 per cent., were found to be bad

TUBERCULOUS DISEASE BY MILK.

DR. I. EDMUNDS, M.O.H., St. James's, Westminster, in his annual report says: "The dissemination of tubercular disease through the medium of milk and cream derived from tuberculous cows is a danger which, of late, has

exercised the public mind. Taking tuberculous disease of the lungs (phthisis), it will be seen that during the year 1898 the deaths certified for St. James's as due to phthisis were 47, as against 53 in the year 1897. There has been a general and continuous reduction in the mortality from tubercular diseases—a reduction due probably to improved sanitary and dietetic conditions, which have increased the resisting power of the people. But it is most important to exclude from our food altogether, if possible, the infection of tubercular germs. This may be achieved in two ways: one by exterminating tuberculous cattle, the other by sterilizing the milk and other cattle products which are used as food.

The extermination of tuberculous cattle is the real desideratum. But this will be difficult to realise. In 1898 her Majesty ordered the 40 non-pedigree cows which served the dairy of Windsor to be destroyed, because, on being tested with tuberculin, 36 of them were found to be tuberculous. Now, the premises in which these cows of the Royal herd had been kept were probably the best in the kingdom. In regard to cubic space, light, ventilation, cleanliness, and feeding there had been nothing to be desired. The cows, moreover, were in good condition, and apparently healthy. But, as a mere matter of precaution, and in order to exclude from the dairy any cow or cows which might be found to react to tuberculin, this test was used in September, 1898. No less than 36 out of this splendid herd of 40 cows were found to react. These 36 cows were ordered to be slaughtered, and submitted to a careful *post mortem* examination. Subsequently it was thought that the value of the investigation would be greatly increased if the other four cows also were slaughtered and examined at the same time. Of the 36 cows, the bodies of 35 were found to exhibit tuberculous lesions, and the thirty-sixth cow was found to be suffering from another form of internal disease. The four cows which did not react to the tuberculin were found to be free from disease, with one exception. In this splendid and perfectly-cared-for herd of 40 dairy cows, therefore 36 were found to be tuberculous, one was the subject of another visceral disease, and three were healthy. The results of this entirely unimpeachable investigation show that the trading dairyman often deserves our sympathy when tuberculosis shows itself among his cows. It also indicates that the meat and milk used by the public must come from tuberculous cattle to a much larger extent than has ever been surmised. It seems, therefore, to follow that the tubercular germs take effect rather upon persons who lack resisting power, and that predisposing as well as exciting causes must combine—so as to work together in order to effectuate the dissemination of tuberculosis. Otherwise, all persons who drink milk or eat meat would become tuberculous. The facts yielded by this investigation of the Royal herd of non-pedigree dairy cows indicate the practical impossibility of exterminating all the cattle which are affected by tuberculosis. They also suggest that in the cultivation of a high standard of personal vitality lies our present chief defence against infection by tubercular and other germs.

The establishment of large dairies using only cows which have been tested and proved free from tubercular disease will doubtless be a powerful factor in the future improvement of our supplies of milk and meat. It is obvious that such dairies, so soon as they are in vogue, will command the public custom for milk, and will supersede small dairies which are not scientifically supervised, and from which questionable cows are not sacrificed. Meanwhile there is the very practical device of sterilizing the milk. Several useful and effective forms of patent saucepan sterilizers* have been introduced, and are in large and increasing demand. But the principle by which sterilization of milk is effected is very simple and intelligible. Sterilization can be done perfectly by the use of a bottle to contain the milk, and an ordinary saucepan to contain water in which the bottle of milk can be immersed up to

a level with the top of the milk. All that is then needed is to heat the water in the saucepan slowly until it boils, and to boil it for five minutes. It can then be set aside to cool down slowly, while the bottle of milk remains in the water. It is only necessary to raise the milk nearly to the temperature of boiling water, and to keep it at that temperature for 10 minutes. This makes the milk safe by killing any tubercular or other germs which may be present—as a similar exposure to the boiling water would kill an egg. An ordinary glass-stoppered bottle (perfectly clean) to receive the milk, may safely be exposed to this method of heating in any ordinary iron saucepan; but in order to protect the bottom of the bottle from the direct heat of the fire and to prevent the milk from being burnt, a disc of thick wire netting should be placed upon the bottom of the saucepan, and on this the bottle should stand. A wire teapot-stand, or a wire frame like an old-fashioned decanter stand, is a satisfactory support, made so as to give a half-inch space for the water to boil freely in beneath the bottom of the bottle. The milk may remain in the unopened stoppered bottle until it is wanted for use. Its flavour will be but slightly changed. This simple treatment will reduce practically to nothing the danger of receiving milk from a cow suffering from latent tuberculosis. To stamp out tubercle would be the greatest of all the triumphs of sanitary science.

There are no cowhouses nor slaughterhouses in St. James's.

GLASGOW CORPORATION AND THE PURITY OF TARTARIC ACID.

THE Health Committee of the Glasgow Corporation recommend, with regard to tartaric acid and cream of tartar, that the standard of the new "British Pharmacopœia" be taken by the sanitary inspector and public analyst in testing samples of drugs, &c. Councillor Chisholm said that before the Council agreed to the proposal they ought to be informed what alteration was made on the existing "Pharmacopœia." If he was rightly informed, the alteration made in regard to tartaric acid was of a kind which made it practically impossible for an ordinary shopkeeper to sell it, or the ordinary householder to purchase it. Up to the present time tartaric acid was absolutely innocuous. He wished the chairman to take back the minute in order to give them fuller information on the subject. The Clerk (Mr. J. Lindsay), said that about eight months ago it was agreed to take the new "British Pharmacopœia" as the standard, but in respect of the hardship that would be inflicted upon retailers it was agreed that no proceedings under it should be taken for six months so as to afford the retailers a reasonable opportunity of getting rid of that which they had purchased in good faith. That period had now elapsed, and the sanitary inspector had taken samples of tartaric acid and got them analysed, and now came to the committee for instructions. Councillor Chisholm pointed out that if the new standard were adhered to and prosecutions made on the basis of it then every shopkeeper would be convicted, and would have to give up selling tartaric acid, for the price of it would rise 300 per cent. and make it practically beyond the use of the ordinary householder. Councillor Dr. Garey said that the General Medical Council had given them the new standard, and although only 1 per cent. of lead was formerly in tartaric acid yet the General Medical Council thought it would be better to have the pure article. He contended that even 1 per cent. of lead in tartaric acid would not lead to prosecution. As to the cost being 300 per cent. more than at present, he did not see how that could be. It was agreed to alter the minute so as to include a suggestion of Bailie Anderson that before prosecutions took place under the new "Pharmacopœia" the matter should be reported to the Health Committee for instructions.

* Aymard's Patent Milk Sterilizer is simple and effective.

SUGGESTED STANDARD OF PURITY FOR FOODS AND DRUGS.

By G. C. MOOR and C. H. CRIER.

In dealing with the analysis of articles purchased under the Sale of Food and Drugs Acts, one of the principal difficulties encountered by the public analyst is the lack of information on which he is to base the conclusions to be drawn from his work.

In other words, in the case of many articles which may be submitted to him, where and how is he to draw the line separating the genuine from the adulterated sample? In the case of very many articles there might be a third class, in addition to the genuine and the adulterated, namely, specimens "of inferior quality but not of necessity adulterated." In the case of many natural products it seems that such a class must always exist, and it is in respect of the doubtful cases that attention is specially required.

In the case of articles distinctly good or distinctly bad, there is little or no difficulty in determining how to deal with them.

The object of the present paper is to attempt to ascertain whether the dividing line between the three above mentioned classes can be drawn somewhat more distinctly than at present. For this purpose we require to know both the average composition of genuine articles, and also the composition of articles not of the highest quality, but of proved genuineness.

Dealing with the question of standards, we have no legalised standards at all except in the case of spirits, and in the case of a few articles of food the limits adopted by the Inland Revenue authorities are known (as in the case of milk) and are probably used by most analysts. In addition certain standards were proposed by a committee in the early days of the Society of Public Analysts, which dealt with milk, cocoa, vinegar, mustard, and a few other articles, but at the present day some of the standards then agreed on would not find general acceptance.

In addition to the question of the composition of articles, the names and definition of many substances deserve attention, as a very slight change of description in the article sold may result in its composition being entirely different.

To show the need of standards in relation to articles of food (omitting drugs for the moment) we may consider the following questions:—What is the composition of the ordinary articles in everyday use which we should consider as satisfactory evidence of their genuineness, or, in other words, what limits are we to place on the various substances which are determined by analysis?

To take bread, how much water is to be allowed? Or cocoa, how much fat ought there to be in it, or need there be any at all? Or in the case of vinegar, how much ascertained acid should there be? Or in mustard, should we have a limit depending on the amount of fixed oil or not? It will be seen that in the case of almost every article of food there is an important question to be answered which is at present unsettled.

There are some 300 articles which have been, or might be, purchased under the Food and Drugs Act, and we are of opinion that in the case of many of them some mutual agreement might be come to which would result in the adoption of a provisional standard, which would be of general convenience.

We are engaged in collecting as far as possible reliable figures on the composition of the 300 odd articles mentioned, but space will, of course, only permit of the mention here of a few, which we shall select as typical. To complete the task of collecting the information (much of which is probably in existence, though unpublished), of course, necessitates the co-operation of those whose life is spent in examining the products dealt with, and it is in the hope of obtaining such help that we venture to appear to-day with this very unfinished and incomplete paper.

The scheme under which we are dealing with each

article is as follows: first, the name of each article, its definition and description, its adulterations, the standard where possible, or where sufficient information does not exist to formulate a standard, its average composition, next references to recent literature, and finally remarks.

In this paper, for the sake of brevity, we have omitted almost all references.

TINCT. ACONITE.

Preparation.—Aconite root in No. 40 powder, 50 Gm. Alcohol 70 per cent. to make one litre (prepared by percolation).

Composition of Genuine Samples.

Sp.Gr. at 15.5.	Total Solids.	Alcohol.	Alkaloid.
0.890 (Barclay)	—	—	.02*
0.893 (Lucas)	1 (M. & P.)	—	—
0.896 (P. & M.)	1.2 (M. & P.)	{ 64.3 per cent. (P. & M.) }	—
0.893 (Caines)	—	—	—

Remarks.—On account of the variability of the alkaloid even in the best roots it does not seem possible to suggest a standard, but a single drop placed on end of the tongue should produce the characteristic numbness.

ANETHI FRUCTUS (DILL FRUIT).

Definition.—"The dried ripe fruit of *Peucedanum graveolens*." B.P.)

Description as in B.P.

Adulterations.—Excess of mineral matter. Exhausted fruits.

Standard.—Volatile oil should be about 2 per cent. Ash should be about 5 per cent.

TINCT. ARNICA.

Preparation.—Arnica rhizome in No. 40 powder, 50 Gms. alcohol, 70 per cent. (to make 1 litre).

Composition of Genuine Samples.

Sp. Gr. at 15.5	Total solids.	Alcohol.
.894 (Lucas)	... .6*	—
.894 (Barclay)	.. .46 M. & P....	69.0 per cent. (M. & P)
.891 (M. & P.)	... .92 (M.&P.)...	—

BREAD.

A porous substance obtained by moistening, kneading, and baking wheat-flour with provision for the mechanical separation of the dough by air or carbonic acid gas.

Adulteration.—Excessive water, foreign starches, alum, or mineral matter.

Standard.—Water not to exceed 45 per cent. Total ash not to exceed 2 per cent. Ash insoluble in acid not to exceed 2 per cent.

Remarks.—Is the separation of the germ legitimate?

BUTTER.

Definition.—"The fatty substance obtained on churning cream." (Murray.)

Adulterations.—Foreign fats, excess of water, salt, and preservatives.

Standard.—Water not to exceed 16 per cent. salt not to exceed 5 per cent. Fat must be true butter fat, as shown by the Reichert and Valenta tests.

Remarks.—Where both Reichert and Valenta tests concur in showing adulteration, the amount of foreign fat present should be calculated on the basis that true butter, when examined by the Reichert process, gives an acid distillate equal to 24 C.c. of decinormal alkali when 5 Gm. of butter are operated on.

Nothing is gained by multiplying tests or by more elaborate processes, and the above suggestion would secure uniformity of procedure and reporting.

CANTHARIDES.

Definition.—"The dried beetle, *Cantharis vesicatoria*." (B.P.)

Characters.—As in B.P.

Adulterations.—Exhausted insects, mineral matter, beetles of similar appearance.

Average Composition.—Water should not exceed 5 per cent. Fat by petroleum etheo, about 20 per cent. Total ash should not exceed 8 per cent. Cantharidin (total) should be about 0.5 per cent.

*Suggested as a standard by Barclay.
(To be continued next week).

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Food and Sanitation.

SATURDAY, SEPTEMBER 16, 1899.

WATER AT SPIRIT PRICE.

At Taunton Police-court, William Counsell, landlord of the Bell Inn, Creech St. Michael, was charged with having sold to P.S. Pridham a pint of gin which was 38 degrees under proof. Mr. Clarke appeared for the defendant, who pleaded guilty. Mr. Durham said that on the 4th July, Sergeant Pridham, of North Curry, was served by Counsell at his house with a pint of gin, which was subsequently delivered to the County Analyst, Dr. Alford, from whom he produced a certificate showing that it was 38 degrees under proof. This was three degrees more than was allowed by law. Mr. Clarke, for the defendant, said he had been a publican for eleven years,

and this was the first time that any case whatever had been brought against him. It appeared that there was a hole in the cork of the cask in which the gin was kept, and this had allowed the spirit to evaporate, which accounted for its being under strength. Defendant was fined 5s. including costs.

At Chichester on September 9th, William James Hower, landlord of the Claremont Inn, Bognor, appeared to answer an adjourned summons for selling brandy not of the nature, quality and substance demanded, Mr. W. P. Cogan again appeared for the prosecution, Mr. J. Haywood representing the defendant. The case had been adjourned from the last Court in order that the defence might produce analytical evidence in opposition to that of the County Analyst. Mr. Haywood now called Mr. Archibald Wilson, pharmaceutical chemist in the employ of Messrs. Headlands, Limited, of Brighton, and formerly a student under Dr. Muter, who produced an analysis which shewed that the sample of brandy was only 23 under proof, and that there had therefore been no infringement of the Act. He contended that his figures were right as compared with those of Mr. Hehner. Mr. Cogan put to the witness a table for him to work his figures out by, but it was found that they did not agree; and the witness explained that he had arrived at his results by an entirely different table, viz., one of which Dr. Muter was the author. Mr. Otto Hehner, County Analyst, was afterwards put into the box. He stated, in answer to Mr. Haywood, that he and two assistants analysed the brandy. The analyses though differing slightly corresponded as accurately as could be expected, and showed that the sample was 30 under proof, and contained an excess of 4.6 of water. In cross-examination witness said he had seen the certificate on the other side and considered that the figures therein did not agree with each other. The brandy was worse than the certificate of the previous witness made out. He did not consider the table of Dr. Muter was suitable for an analysis of this kind. Replying to the Bench, Mr. Hehner said it was in no way a bad case of adulteration, but the law fixed the limit at 25 under proof, and there was consequently an infraction of the Act. After a short consultation, the Bench saw no cause to dispute the analysis of the County Analyst, and fined the defendant 20s. and the costs. Mr. Haywood: We shall have to go to Quarter Sessions. The Chairman: You may go anywhere you like (laughter). Mr. Haywood: I am afraid no one can stop me in that respect (laughter).

EXCESS WATER IN BUTTER.

For selling butter adulterated with 17 per cent. of water, a shopkeeper was summoned at Thames Police-court yesterday. Mr. Dickinson was puzzled. During the twenty years he had been in that court he never had had such a case. It was a case of squeezing, said the magistrate. There was some places where butter was never pressed.

The analyst not being present, the problem was solved by withdrawing the summons.

ADULTERATED COFFEE.

At Leven Police-court, Jesse Russell, a Skipsea shopkeeper, was summoned under the Food and Drugs Act, and charged with selling adulterated coffee. Evidence was given which showed that the coffee had been adulterated with chicory to the extent of 80 per cent. The Chairman, in fining defendant 20s. and costs, characterised the case as a very bad one.

AN OLD SCHOOL DAIRYMAN.

At Bideford Petty Sessions, William Folley, dairyman, of North Road, pleaded not guilty to a charge of selling milk which was adulterated to the extent of 10 per cent. of added water. Mr. A. J. Lawman, defended. John Lugg, sanitary inspector, said, in pursuance of the orders received from the Town Council, he visited defendant's

premises at about 9 a.m. on August 10th. He asked for a pint of milk for which he tendered 1s. and he received 10d. change. He then received the milk and he told Mrs. Folley that he had taken it to have it analysed. He divided the milk into three parts in Mrs. Folley's presence and putting it into three different bottles sealed it. He gave one to Mrs. Folley, and one he sent to London to Mr. Harland, public analyst, and the other part he kept. The analysis showed there was ten per cent. of added water. Cross-examined: He particularly told Mrs. Folley it was going to be sent away to be analysed. Mr. Lawman said defendant had been in business for twenty-five years, and had never had a complaint before. The fact was Mrs. Folley was one of the old school of dairymaids, and did not adopt the modern methods to scald milk. When Mr. Lugg came on the morning in question it so happened that there was only one pan of milk left, and that was the one which was intended for scalding, and to that had been added a small quantity of water in the bottom of the pan to keep the milk from burning. For that purpose it might be thought that 10 per cent. was a large amount of water, but it was further accounted for by reason of the very dry season and poor nourishment for the cows. The Bench considered it a clear case, but as it was the first one of its kind, they would let defendant off with a fine of 10s. and costs. If any similar cases were brought before them they would be severely dealt with.

MILK AS THE COW GIVES IT.

At West Ham on September 6th, Mr. E. D. Morgan, a farmer, of Stow Hall Farm, Stow Maries, Maldon, was summoned on two informations taken out by Dr. C. Sanders, medical officer of health for West Ham, for selling to Mr. Elliott, a milk dealer, milk which was adulterated with 5 per cent. in one case and 6 per cent. in the other of added water. Mr. J. S. King represented the defendant, who did not appear. It appeared that, in consequence of a complaint, Dr. Sanders on July 21st caused two churns of milk, consigned by the defendant to a Mr. Elliott, to be sampled on Elliott's premises, at Lett Road, Stratford. From the time the churns left Stratford main station they were under the observation of officials of the Sanitary Department, and when the samples were analysed they were found adulterated with 5 per cent. and 6 per cent. of added water. For the defence Mr. King called evidence to show that the milk in the churns was not tampered with from the time it left the cow till it was delivered to the railway company at Cold Noriton Station. Mr. Elliott (the deputy stipendiary) said he must convict, but looking at the climatic conditions he had come to the conclusion that a fine of £1 on each of the summons with £2 12s. 6d. costs would meet the case.—M. N. Nicholls, of Hallsford Bridge, Ongar, was summoned for a similar offence, the milk in this case also being consigned to Mr. Elliott, of Lett Road, Stratford, and the adulteration was 5 per cent. of added water. The defendant swore that the milk was as the cow gave it. He was fined £1 and £1 10s. 6d. costs.

ADULTERATED SYRUP.

Action against a Co-operative Society.

At Manchester, on September 8th, Mr. Yates heard a summons taken out against the Walkden Co-operative Society for selling adulterated syrup. Mr. Chapman prosecuted on behalf of the police. The evidence showed that on the 1st ult. Inspector Petch purchased two pounds of golden syrup at the Society's shop at Walkden. A portion of the syrup was sent to the county analyst for analysis, who certified that it contained 25 per cent. of glucose syrup. Mr. Chapman said the defendants did not dispute the certificate of the analyst. The secretary of the Society said they regretted very much that the syrup had been found to be below the standard. They bought it as pure syrup and sold it as it was received. It was an article for which there was no great demand, and since last December they had only sold 2s. worth per week out

of a total turnover in goods of £250. They had decided, however, to give up the trade in syrup, and were only waiting to empty the puncheon. Mr. Yates said the case was not a serious one. The defendants were "more sinned against than sinning," and the person to blame was the person who sold the syrup in the first instance. A penalty of 5s. and costs was imposed, the smallest the magistrates have power to inflict.

THE MANCHESTER SELF-RAISING FLOUR CASE.

Strange Analytical Differences.

At the Manchester County Police-court, on September 7th, before Mr. J. M. Yates, Q.C., and other magistrates, Annie Moffatt was summoned for selling flour containing ingredients injurious to health. Some time ago the case was heard at this court, and upon the advice of Mr. Yates some of the flour was sent to Somerset House, which the county analyst said contained 170 grains of alum and 140 grains of bicarbonate of soda, with the result that the analysts at Somerset House certified that it contained no alum at all. It appears that on May 31st Inspector Jones purchased a pound of self-raising flour at the defendant's shop for the purpose of analysis, a portion being sent to Mr. W. Collingwood Williams, one of the county analysts, who certified that it contained 170 grains of alum. A summons was issued against the defendant, but upon the hearing of the case it was stated that a portion of the same flour had been analysed by Mr. William Thomson, of Manchester, who had certified that it contained no alum at all. This being discovered the magistrates sanction was obtained for a portion of the original sample of flour to be sent to Somerset House for analysis with the result that it was shown that they certified that the flour contained no alum at all. Further proof of its purity being desired, it was resolved to send the remainder still in Mr. Collingwood Williams' possession to the same place, and that the summons be adjourned until the arrival of the certificate, it being urged that the great difference in the analysis justified such a course. It was stated that self-raising flour was a substance with a baking powder added, and it was quite possible that the baking powder, when put into the flour, might have been placed either at the top or the bottom of the bag, and that the portion submitted to Mr. Williams was the portion containing the baking powder alone.—Mr. Chapman appeared for the prosecution this morning, and stated that the case was last before the court on July 23rd, and at the conclusion of the evidence of the county analyst it was adjourned to obtain the certificate of the Somerset House authorities. The certificate had now been obtained, and was in direct conflict with that of the county authorities. The Government certificate was that the flour was free from alum. Having regard to that circumstance he did not propose to proceed any further with the case, although he had evidence in court in corroboration of the certificate of the county analyst. It was important for him to make that statement because it would appear that he had made a mistake. Unfortunately there was a conflict of expert evidence, and, of course, the defendant was entitled to the benefit of the doubt. The prosecution made no imputation upon the defendant at all, and with the permission of the magistrates proposed to withdraw the summons.—Mr. Chorlton said he thought the case had been left in such a position as to leave some doubt upon the character of the goods the defendant sold. He had not had the opportunity of putting the defendant's case before the magistrates, but he thought it would be sufficient for him to say that she utterly denied that there was any alum at all in the flour. He was prepared to prove that defendant was entitled to an absolute acquittal. Regarding the question of costs, he did not know the rule of that court, but he thought the case was an exceptional one. Mr. Chapman had pointed out that the prosecution was taken on the report of the county analyst, but it was the duty of the county analyst to make a true report, or a report which, in the opinion of the bench, was assumed to

be correct. In that case the prosecution had been founded upon an error, and the defendant had been put to great expense to defend her trade, and he should ask the bench to give a reasonable sum for the costs of the case.—Mr. Yates said that the case was one of considerable importance for more reasons than one. It was a case which no doubt had imposed upon defendant, who was free now of any charge of adulteration, and entitled to serious costs. It had been alleged that self-raising flour had been adulterated with alum and bicarbonate of soda so as to render the bread injurious to health. It was further alleged that the self-raising flour was perfectly free from alum, and an eminent chemist was present in court to prove that fact. He, as representing the bench, had taken it into his hands to direct that a portion of the flour should be sent to Somerset House, and he had received a certificate signed by two chemists that the flour was entirely free from alum. That clearly showed that there was a mistake on the part of the county analyst, and he was of opinion that the matter really arose to a great extent from the fact that matters sent to the county analyst for analysis were often submitted to assistants. There probably the whole mischief arose, but it was impossible to give that supervision which was necessary in a case of this description. This reminded him of some ginger sent to Somerset House some time ago, and on that occasion also there was a difference between them and the county analyst. Exactness was of the highest importance. They would allow 10 guineas costs for the defendant.

SWEET SPIRITS OF NITRE PROSECUTION.

At Woburn, Phillip Arthur Parkins, grocer, of Eversholt, was charged with having, on August 11th, sold to Sergeant Mason, of Bedford, an inspector under the Food and Drugs Act, six ounces of sweet spirit of nitre to the prejudice of the purchaser, the article not being of the nature, substance, and quality demanded. Defendant, in reply to the charge, said his guilt or otherwise depended upon what the words of the summons meant. The inspector did not demand spirit of any quality or substance, and he (defendant) supplied him with the article as he had it for sale. Sergeant Mason gave evidence that when he made the purchase he paid 2s. for the nitre; he told defendant who he was and what was his object, and, dividing the purchased spirit into three parts, as required by the Food and Drugs Act, retained one part, left another part with defendant, and sent the third portion, sealed, to Dr. Stevenson, county analyst, whose report, now put in, stated that there was a deficiency of 60 per cent. of nitrous ether. The Chairman said that on such a report the case was a bad one. Defendant, put in a note from Mr. P. S. Canning, chemist, of Leighton Buzzard, stating that the spirit nitre, as supplied to defendant, was "P B 1898," such as the inspector would require, and exactly the same thing as would be supplied by the writer. Defendant added that he had sent away his sample for analysis, but had not yet received any intimation of result. The nitre, defendant added, had deteriorated by evaporation occasioned by heat. It could not be kept intact, even in capsuled bottles. Sergeant Mason said it was only fair to admit that the spirit did evaporate unless great care was taken, but evaporation might be allowed to go on until the nitre became absolutely useless; it was an article sold extensively by grocers, and this case had been brought here to serve as a caution. That being so, he was quite willing to withdraw the charge on defendant paying costs. Defendant was required to pay 19s. 6d. costs, and the case was then struck out.

BUTTER ADULTERATION.

At Grantham, Edith M. Cook, in the employ of Charles English, baker and confectioner, 11, London-road, Grantham, was summoned under the Food and Drugs Act for selling 1 lb. of butter, which was not of the nature, substance, and quality demanded, on the 11th of August

last. Mr. English appeared in place of the defendant. Mr. James Barnacle, inspector under the Food and Drugs Act, stated that on the day in question he called at Mr. English's shop, and saw a young person named Edith Cook, whom he asked for 1 lb. of tenpenny butter. Witness told her that he required it for analysis, and gave her one of the forms produced. Witness divided the butter, and gave the girl a third part. Witness submitted the butter to Dr. Ashby, the analyst for the borough of Grantham. Witness saw two other persons served with the butter. The bulk of the butter was at the back of the shop, behind a cake case, and it was marked "Margarine." Witness received the certificate produced from Dr. Ashby, which showed the sample of butter to contain "Margarine, 100 per cent. of fat, and coloured yellow." Defendant said the margarine was wrapped up in paper which stated that it was "Margarine." Mr. Barnacle asked for 10d. butter, and a niece, who was staying with him from Boston, gave Mr. Barnacle the "Margarine." Mr. Barnacle said Mr. English had sent him a letter, which he (Mr. Barnacle) considered an insulting one. The letter threatened to report Mr. Barnacle to the Watch Committee. A fine of £2, including costs, was imposed, the Chairman remarking that Mr. Barnacle had done his duty, and he hoped the public would not be deceived by this sort of thing again.

At Wednesbury, on September 12, J. Spitele, a foreign importer of butter, was fined £20 for what the Stipendiary described as one of the meanest frauds ever perpetrated in South Staffordshire. The defendant obtained an order to supply a small shopkeeper with twelve pounds of butter, and was detected by the county inspector while delivering a substance which only contained seven per cent. of the real article.

BRANDY SUBSTITUTION.

A PROSECUTION under the Merchandise Marks' Act engaged attention at Clerkenwell on September 12th, when Lucian Besser, of the White Hart, Theobalds-road, Holborn, answered an adjourned summons before Mr. Bros, charging him with having falsely applied to brandy the trade mark of Messrs. Martell and Co.—"Three Star Brandy"—contrary to the Merchandise Marks' Act, on June 8. There were two other summonses against the defendant for selling the brandy and exposing it for sale. Mr. Bodkin appeared for the complainants, and Mr. Newton for the defendant. Mr. Bodkin said the complainants were probably the largest shippers into this country of "Three Star Brandy." In consequence of information received, Messrs. Martell's agents in this country instructed Mr. Jarvis, late detective chief inspector, to make inquiries on defendant's premises. The allegation against the defendant was that he poured "Le Grand Frères" one star and "Trois Empereurs" brandy into a bottle labelled Martell's "Three Star Brandy." The "Trois Empereurs" brandy was a less expensive spirit than "Three Star Brandy." The evidence of Mr. Jarvis was that he asked for some of Martell's brandy and was served with the substituted spirit from one of Martell's bottles. Some was consumed in the house and some taken away. Mr. G. Clark, trading as Matthew, Clark and Son, London agents to Messrs. Martell, proved that the brandy supplied to Jarvis was not the "Three Star" brand, nor did it resemble Martell's brandy in any quality. Mr. Newton's defence was that no such offence as alleged in the summons had been committed. He urged that "special brandy" was asked for and special or French brandy served. In the case where Martell's brandy was asked for it was served. Mr. Bros committed the defendant for trial.

A SPECIMEN VEGETARIAN.

MR. S. SAUNDERS, of Market Lavington, informed the Vegetarian Congress that he was eighty-five years of age, had been a vegetarian sixty years, and had never

suffered any aches or pains, or been confined to his bed for a day through illness.

His diet is:—

Breakfast—Porridge, with a little milk, and one potato or other vegetable from the previous day.

Dinner—Two or three varieties of vegetables, rice pudding, a little fruit.

Tea—"Real wholemeal, home-made bread," a little cheese, two cups of weak tea.

Supper—No supper; he "ate nothing after 6 p.m."

His conviction was the simpler people lived, taking their food very much as nature provided it and in moderation, the healthier and happier they would be, the greater enjoyment they would derive from life. (Applause.)

There is apparently scant difference between Mr. Saunders and other things that vegetate. He must be a gentleman of infinite taste.

SUGGESTED STANDARD OF PURITY FOR FOODS AND DRUGS.

By G. C. MOOR and C. H. CRIBB.

(Continued from page 442).

TINCTURE OF CANTHARIDES.

Preparation.—Cantharides in No. 40 powder, 12·5 Gm.; alcohol 90 per cent., 1 litre (prepared by maceration.)

Composition of Genuine Samples.

Sp. Gr. at 15·5	Total Solids.	Alcohol.
0·834 (Lucas) ...	0·26* ...	—
0·838 (Barclay) ...	— ...	88·5 (P. & M.)
0·835 (P. & M.)	0·24 (M. & P.)	—
0·834 (Caines) ...	— ...	—

Adulteration.—Excess of mineral matter.

CAPER TEA.

Standard.—Mineral matter insoluble in dilute acid not to exceed 3 per cent.

CARAWAYS.

Definition.—

Adulteration.—

Standard.—Ash not to exceed 8 per cent. Volatile oil, about—per cent.

CAYENNE PEPPER.

Definition.—"The dried fruit of the *Capsicum midimum*." (B.P.) (This applies only to that employed in medicine.)

Adulteration.—The addition of starchy matters, mineral matters.

Standard.—Ash not to exceed 6 per cent.† B.P. Resin should be not less than 15 per cent. Water should not exceed 10 per cent.

CHEESE.

Definition.—A solid substance prepared by curdling milk and pressing the curd after draining off the whey.

Adulteration.—The addition of foreign fat. The use of skim milk. The addition of extraneous matters.

Standard.—Cream cheese should contain not less than 40 per cent. of fat. "Cheese" sold without any qualifying description should contain not less than 30 per cent. of fat. If it contains less than 30 per cent. of fat it should be sold as prepared partly from skimmed milk.

Remarks.—Several American States have fixed standards for fat in cheese.

CLOVES (CARYOPHYLLUM).

Definition and Description.—As in B.P.

Adulteration.—Exhausted cloves and excess of mineral matter.

Standard.—Moisture should not exceed 5 per cent. Extract to ether about—per cent. As should not exceed 7 per cent. B.P. "When indented with the nail, cloves should emit oil." B.P.

*Proposed as a standard by Barclay.

†We have examined a genuine sample containing a higher ash.

COCOA.

The roasted and ground seed of the *Theobroma cacao*, with part of the natural fat removed.

Adulteration.—The addition of starch and sugar.

Standard.—Water should not exceed 8 per cent. Ash should not exceed 5 per cent., except in samples prepared with an alkali, when it should not exceed 9 per cent.

CONDENSED MILK.

Adulteration.—The addition of preservatives, deficiency of fat, addition of any substances except sugar.

Standard.—The fat should not be less than 10 per cent., and must be true butter-fat. The nitrogenous matter should not exceed the fat. The ash should be between 2·0 and 2·4 per cent.

Remarks.—There is little actual adulteration of condensed milk in this country, but the misrepresentations on the labels as to the dilution with water are frequent, more particularly in the directions for the feeding of infants.

COPPER IN FOODS.

Copper sulphate is used to improve or fix the colour of various preserved green vegetables, such as peas, French beans, gherkins, spinach, etc.

The method in which it is employed results in the formation of an insoluble "leguminate" of copper, and the quantity used is so small that it would be probably quite innocuous even if such vegetables were continuously eaten in large quantities.

Copper is frequently a natural constituent of many articles, such as wheat, coffee, cocoa, oysters, etc., and might very probably be contained in peas grown on a soil containing copper, so that we suggest that in those samples, where the copper reckoned as metal does not exceed 1 grain per pound, on the mixed sample, the sample should not be regarded as adulterated.

The question of sampling such preparations is of importance and was discussed at a meeting reported in the *Analyst* for June, 1897.

The estimation of copper in peas is best carried out by completely ashing the sample and dissolving the ash in sulphuric acid, afterward depositing the copper as metal by electrolysis.

FLOUR.

Definition.—The meal produced on grinding wheat, the husk having been removed.

Adulteration.—Foreign starches, excess of water, mineral matter, alum.

Standard.—Water should not exceed 10 per cent. Total ash should not exceed 1 per cent. Alum must be absent. Microscopic appearance must be normal.

GINGER.

Definition.—"The scraped and dried rhizome of the *Zingiber officinale*."

Adulteration.—The addition of exhausted ginger, excess of mineral matter.

Average Composition of Genuine Samples.

Ash	about	5 per cent.
Soluble Ash	"	2 "
Cold water extract	"	10 "

As a provisional standard we suggest that any sample showing less than 2 per cent. of soluble ash, or less than 10 per cent. of matter extracted by cold water is almost certainly adulterated.

The ash may be considerably higher than 5 per cent.

Remarks.—From the B.P. definition, any whitewashing, soaking or other treatment is excluded.

HONEY.

Definition.—"The saccharine substance collected by bees and deposited by them in the honeycomb."

Characters.—The B.P. describes "mel depuratum," but it appears that commercial honey should correspond to the same tests.

Standard.—Sp. Gr. about 1·365 (U.S.P.). Ash not to exceed 0·25 per cent. (B.P.). Water not to exceed 25 per cent. Absence of starch. Sulphates not to exceed traces (B.P.).

Remarks.—The B.P. should include the test with polarimeter.

HUMANISED MILK.

Definition.—"A preparation of cow's milk so adjusted as regards fat, albuminoids, milk and sugar as to closely approximate to the composition of human milk."

It should not vary much from the following composition:—

Fat.....	3.4 per cent.
Milk—sugar	6.4 "
Albuminoids	1.7 "
Ash	0.2 "

TINCT. HYOSCYAMI.

Preparation.—Hyoscyamus leaves and flowering tops, in No. 20 powder, 100; alcohol, 45 per cent. to make a litre.

Composition of Genuine Samples.

Sp. Gr. at 15.5.	Total Solids.	Alcohol.
0.950 (Lucas). ...	—	45.5 (P. & M.)
0.953 (Barclay). ...	—	—
0.955 (P. and M.) ...	—	—

Barclay suggests .008 per cent. of alkaloid as a standard.

MACE.

Definition.—The outer coat or arillus of the nutmeg *Myristica fragrans*.

Adulteration.—Bombay mace, exhausted mace, starches and mineral matter.

Standard.—Water should not exceed 10 per cent. Ash, 5 per cent. Ether extract should be about — per cent. Starch must be absent.

MALT EXTRACT.

"A honey-like substance, prepared by concentrating an aqueous extract of malt at a temperature not exceeding 130° F.

Adulteration.—Deficiency in diastatic power, excess of water, etc.

Standard.—Acidity, as lactic acid, should not exceed 1 per cent. Water should not exceed 25 per cent. Diastatic power, the sample must be capable of converting its own weight of starch in ten minutes. Preservatives should be absent.

PIMENTO (ALL-SPICE).

Definition.—"The dried full-grown unripe fruit of *Pimenta officinalis*." (B.P.)

Adulteration.—Oxide of iron, mineral matter.

Standard.—Water should not exceed 10 per cent. Ash 6 per cent. Ether extract, about — per cent. Microscopic appearance normal.

PRESERVATIVES.

The question as to the propriety of adding "preservatives" to foods is one that has recently excited much attention and is still a source of frequent contention.

The question appears to us to have a different bearing according to the kind of article in question, and we consider that in some articles they should be permitted (with disclosures of their presence), and that in certain other articles they should not be permitted at all.

In the following articles they should be absolutely prohibited:—Infants' foods, condensed milk, wines, tinned meat, fresh fruit.

In the following they might be allowed in certain stated proportions:—Milk, butter, cream, potted meat, lime juice and fruit syrups, beer, and other beverages.

TINCT. RHEI CO.

Composition altered in '98 B.P.

Composition of Genuine Samples.

Sp. Gr. at 15.5.	Total Solids.	Alcohol.
0.971 (Lucas). ...	—	—
0.970 (Barclay). ...	16.7 (Caines)	51.9 (P. & M.)
0.972 (P. and M.) ...	—	50.8 (M. & P.)
0.974 (Caines) ...	—	—
0.971 (M. and P.) ...	—	—

SAFFRON.

Definition.—"The dried stigma and tops of the styles of *Crocus sativa*" B.P.

Adulteration.—Barium sulphate, gum, oil safflower, dyed marigold leaves.

Standards.—As in B.P., with addition, that if 1 Gr. is extracted in the cold with 60 per cent. alcohol and the extract dried it should weigh about 0.06 Gm.

WINE VINEGAR.

Adulteration.—The substitution of acetic acid prepared from other sources.

Standard.—Acetic acid about 6 per cent. Total solids about 1 per cent. Ash about 0.25 per cent.

ADULTERATION OF FOOD AND DRUGS.

Some Points in the Government Report.

NOTICING the report of Dr. Thorpe on the chemical laboratories of the Government, "Commercial Intelligence" says that the various Government departments find it necessary to have samples analysed for the purpose of assessing duties or checking contracts. At some future time each branch may have its own chemist, but at present only the Customs and Excise have laboratories. A few years ago the chemists of the Excise and Customs had a dispute about some technical point, and the Lords of the Treasury thought it advisable to make a new appointment of a principal chemist who should be the nominal head of the various Government laboratories. Dr. Thorpe was transferred from the Royal College of Science. The samples examined are of considerable interest from a commercial point of view, as showing the great variety of foreign goods imported and also the immense supplies of goods for Government contract. The Customs head the list with 172,055 samples for the year, against 82,289 examined by the Excise or Somerset House laboratory. The Customs must also be credited with 1,212 samples of imported butter, margarine, cheese, and cream which are tested by the Excise, with 1,177 samples of drawback snuff and 10,856 samples of drawback tinctures. This gives the Customs 185,300 samples and the Excise 69,044 for the year. The extraordinary feature of this arrangement is that the Excise have a separate staff of analysts, whilst the Customs have only one superintendent analyst. The Customs have officers who possess the same chemical qualifications from the Royal College of Science as the Excise, but they have not been formed into a staff of analysts.

It is probable the Customs will some day see how ridiculous the present position is. "Commercial Intelligence" some time since dealt with the Customs administration of the food and drugs bill with reference to the question of

DIRT IN TEA.

The present report carefully avoids the subject, and Dr. Thorpe cannot deny the statement that the clay and sand are present to the extent of 20 per cent. In fact, a tea broker in Mincing-lane recently received a sample containing 25 per cent. The Customs analysed 947 samples last year, and found 57 to be unfit for delivery, that is, 6 per cent. of the tea analysed. When the tea inspectors submit all dust and caper teas for analysis, it is possible that the seizures will be at least double that percentage.

The New Food and Drugs Act just passed will come into force on January 1st, 1900, and it is to be hoped that the Customs analysts will be more successful in detecting margarine in butter than the Excise have been during the past three years. It is well known that foreign butter is daily imported mixed with margarine up to 35 per cent., and yet Dr. Thorpe and the Excise analysts have only found two samples to be adulterated out of 1,083 examined. Either the sampling of the imported goods has not been representative or the methods of analysis are not up to date. The public was assured for many years that tea was not adulterated, and it must be remembered that an Excise analyst before a recent commission stated that it was impossible to detect 16 per cent. of margarine in butter.

Another peculiarity of this report is the analysis of drawback snuff. The Customs examined 947 samples of offal tobacco for genuineness, and the Excise examined

duplicate samples. There is no record of cases of adulteration, although drawback snuff powder is well known to be mixed with other vegetable matter. A case by the Customs in Liverpool for the addition of sulphur is not mentioned, but a conviction was obtained. It is a pure waste of money sending this work to the Excise, when it may be all examined in the Customs laboratory. The Excise system of allowing excess of dirt and sand is also wrong, and it is certainly irregular to allow a drawback of 2s. 9d. per lb. on this excess.

Tobacco occupies a large space in Dr. Thorpe's report. The consumption of duty paid tobacco is now 21lbs per head of the population every year, as compared with 11lb. in 1851. Some time since "Commerical Intelligence" showed how the tobacco manufacturers were paying

£500,000 DUTY ON WATER

to the Customs. The amount of moisture is now reduced in many warehouses before paying duty by heating the stores by steam pipes, thereby removing about 5 per cent. of water (15 to 10). The Chancellor of the Exchequer, in his Budget speech, could not find an explanation of this loss in the tobacco duty, and many attributed it to smuggling. It is due to drying the tobacco in bond down to 10 per cent. of moisture. Dr. Thorpe does not appear to be aware of this system and it is suggested to him to examine the leaf on payment of duty instead of the ridiculous method of testing 18,034 samples of manufactured tobacco from shops.

This is an instance of the Excise red tape which presses so heavily on British manufacturers. Another is the examination of 13,222 samples of beer materials to check the brewers' declarations. The British public regard the brewers and tobacco manufacturers, Bass and Guinness, Wills and Gallaher, with the greatest confidence, but the Excise analysts will not accept their most solemn declarations unless accompanied by samples for examination. Perhaps the true reason is that if these 31,256 samples were withdrawn the Excise laboratory would then have only 37,788 for the year's return, which would look rather small with such a large staff, when compared with 185,300 samples by the Customs. Hundred of thousands of gallons of cider and grape juice are imported for making champagne and wine, and the Customs do not charge any duty on natural spirit found in these goods, although amounting to 12 per cent. The Excise, however, swoop down on the herb-beer man if his summer drinks contain more than 2 per cent. From the report it appears there were 36 ginger beer prosecutions for 1,433 samples examined.

The commercial side of questions of public interests are all shelved in the report of Dr. Thorpe, for whom apparently there is only one side to all questions—the scientific side. The surtax on spirits and wines is not mentioned, and the Board of Customs go on merrily giving illegal protection to foreign goods rather than have them analysed for sweetening matters. The importation of cider and unfermented grape also occupied some attention when the surtax was imposed, but these matters are at present considered of little importance.

The pretensions of Somerset House officials receive a great set-back by the publication of the Customs figures, and it is quite evident that the Customs Department must lead the way in the application of science to the safeguarding of British interests. It is satisfactory that the Lords of the Treasury have decided to reorganise the Customs Laboratory, and make it the leading one of the British Empire, and therefore of the world. The revelations on "Dirt in Tea," "Surtax on Spirits," &c., left no other course open, despite the opposition of the Board of Customs and the Excise analysts. The report of Dr. Thorpe is most reassuring to the British public, and the Government Laboratory, when freed from the thralldom of Somerset House, will be a credit to the country and the Empire.

MR. LONG, M.P., ON THE FOOD AND DRUGS ACT.

The Warranty Question.

The Federation of Grocers has received the following communication from Mr. W. Long, M.P., President of the Board of Agriculture, in reply to a memorial which was presented on behalf of the retail dealers of the country:—

Board of Agriculture, 4, Whitehall Place,
London, S.W.

SIR,—I am directed by Mr. Long to inform you that he has given very careful consideration to the observations made by the Federation of Grocers' Associations of the United Kingdom in their letter of the 25th ult. with reference to the Sale of Food and Drugs Bill as it passed the House of Commons.

Mr. Long desires me, in the first instance, to acknowledge with gratitude the appreciation which the Federation are good enough to express in such friendly terms of the spirit in which he has endeavoured to approach the settlement of questions of considerable difficulty affecting conflicting interests. Mr. Long's only desire in the matter has been to take such action as will tend to promote honest trading at every stage through which commodities may pass in their transit from producer to consumer, and although Mr. Long has not in every particular been able to concur in the views of the Federation as to the means by which this object may best be accomplished. Mr. Long is much gratified to know that in many respects he has been able to meet the wishes of the Federation, and that his general conduct of the measure now about to become law has met with their approbation.

With regard to the suggestion that the law as it has stood since 1875 should be amended and that an invoice should be regarded for all purposes and in all cases as a warranty, notwithstanding the absence of any express words of guarantee either in the invoice itself or in any other document regulating the contract, Mr. Long desires to offer the following observations.

In the first place he would wish to point out that the law on the subject has been somewhat misunderstood. An invoice containing no express words of guarantee may not in itself be sufficient to operate as a warranty for the purposes of section 25 of the Sale of Food and Drugs Act, 1875, but either an invoice or even a label may well form part of the evidence to show that such a warranty was in fact given in respect of the goods in question. In the case of the Farmers and Cleveland Dairies Company v. Stevenson (60 L.J. M.C. 70) it was held that a label attached to a particular churn of milk was to be read with a running contract for a six months' supply of pure milk and to constitute a specific warranty, and the case of Laidlaw v. Wilson (L.R. (1894), 1 Q.B. 74, 63 L.J. M.C. 37) appears to show that an invoice is material as earmarking goods as having been delivered under a contract; and also that it is not necessary that the word "warranted" should be actually used, provided that the language of the contract imports a warranty and shows an intention on the part of the vendor to warrant.

The important point is that the intention of the whole-sale vendor to give a warranty, and the connection of that warranty with the goods in question, should be supported by evidence sufficiently clear and distinct to justify his prosecution and conviction, for, unless this condition is present, adulterated goods might be extensively sold without the offender being brought to book, with the result that retailers would become less and less anxious to trade with those dealers only upon whose integrity they could confidently rely, and unscrupulous dealers would be able, by the offer of adulterated articles at low prices to transact an illicit and profitable trade without any serious risk of their malpractices being made public and punishment inflicted.

It is on this account that the Local Government Board, and many local authorities, magistrates, and others actually engaged in the administration of the Sale of Food and Drugs Acts, have formed the opinion that if

an ordinary commercial invoice standing by itself and not containing, or not accompanied by, any written evidence of guarantee, were for the purposes of defence under section 25 of the Act of 1875 to be treated as if it were in fact a warranty, a serious blow would be struck against the efficiency of the law, and although both Mr. Long and Mr. Russell were by no means disinclined at the outset to propose that effect should be given to the suggestion of the Federation, if it had appeared practicable and safe to do so, they were both compelled to conclude, after the most careful examination of the question, that it was necessary that the law as it stands with regard to evidence of warranty should remain unaltered if fraudulent trade in adulterated articles is to be efficiently prevented and punished.

At the same time, Mr. Long has kept steadily in view the necessity of providing for the detection and prosecution of the fraudulent wholesale dealer, and the provisions in this respect of the Bill, as it now stands, have perhaps not received sufficient public attention. Under clause 14, the provisions of sections 3 and 4 of the Act of 1879 as to the taking of samples of milk at the place of delivery, which have done much for the protection of dealers in milk, have been extended to other articles of food; and retailers, by co-operation with the officers of the local authority will be enabled from time to time to test the purity of the goods consigned to them prior to their being placed on sale. Under clause 20, the penalties for giving false warranties have been increased; it will be necessary for the person accused of giving false warranty to show that he had reason to believe that the statements were true, instead of for the prosecution to show that the warranty was given with the knowledge that its contents were false; and local authorities will be empowered to prosecute the giver of a false warranty in the place where the test sample was purchased, in all cases in which a retailer has successfully pleaded the defence set out in section 25 of the Act of 1875.

It will be seen, therefore, that although Parliament has found itself unable to meet the wishes of the Federation with regard to any diminution of the existing responsibilities of retailers in regard to the supply of unadulterated articles to their customers, steps have been taken to increase the efficiency of the law in the matter of the supply, by the wholesale dealer to the retailer, of articles of the nature, substance and quality demanded by the latter. But in the very nature of things a certain measure of co-operation on the part of the retailer is necessary to secure this result, the purchase of test samples where goods are not exposed for sale by retail being a matter of no small practical difficulty.

In conclusion, Mr. Long desires me to say that he is much indebted to the Federation for the many valuable suggestions which they have been good enough to make to him since the intention of the Government to propose legislation on the subject of the Sale of Food and Drugs Acts was first announced. The practical knowledge possessed by the officers of the Federation has naturally been of much service to him in the settlement of the complex questions which have arisen, and Mr. Long confidently believes that, if efficiently worked, the Bill, as it has now been settled, will result in the promotion of honest trading and in the punishment of fraud.

I am, sir, your obedient servant,

(Signed) T. H. ELLIOTT, Secretary.

A YEAR'S WORKING OF THE SALE OF FOOD AND DRUGS ACT IN GLASGOW.

The New Act Severely Criticised.

"As your Inspector under the Sale of Food and Drugs Acts," says Mr. Peter Fyfe, Chief Sanitary Inspector, "I beg to state that during the year 370 samples were procured for analysis by the Public Analyst. Of that number 304 were certified as pure, and 66 as adulterated. Sixty

defenders were convicted in the Sheriff Court, and penalties were imposed amounting to £285 12s. 4d.

"In connection with these Acts you are aware that the Government have recently introduced an Amending Bill. The Bill appears to be conceived largely in the interests of the agricultural portion of the community, and your Special Committee on Food and Drugs have on several occasions had it under careful consideration. Amendments have been proposed by your Committee upon it, and these amendments have been backed up by deputations to the House of Commons and considerable correspondence with the Scottish Members of Parliament. One of the Government proposals appeared to me so extraordinary that I communicated with Mr. R. R. Tatlock, one of the City Analysts, asking if there were any difficulties from a chemical point of view in distinguishing margarine from butter, when the two were mixed otherwise than in the proportions laid down by Clause 8 of the Bill. Mr. Tatlock's views on this clause are here given, and I beg to state that I quite agree with his view that the public interest, especially in cities, will not be benefited, but the reverse, by the limitation in the manufacture of margarine which the Government proposes to make.

"Your favour of the 28th instant I have duly received, and am pleased to have an opportunity of submitting my views on Clause 8 of the Bill to the Sub-Committee.

"I reply to your questions in the order and under the heads adopted in your letter:—

"(a) If 20, 30, or 40 per cent. of butter-fat is put into margarine, the methods of chemical analysis which have been devised up to the present time are capable of determining these within at least 5 per cent. In presence of large proportions of cocoa-nut oil, however (such as 40 per cent.), which might quite legitimately be used in the manufacture of margarine, it is questionable whether these methods could be relied upon to give within, say, 10 per cent. The same applies to sesame oil, but in a more limited degree.

"In the event of the clause being adopted, however, and passing into law, there can be no doubt that analysts, as they have always done hitherto, would make such investigations as would enable them to estimate the proportions of butter-fat in margarine within much closer limits.

"The adoption of this clause, it is necessary to explain, would have the effect of placing analysts in a very curious and difficult position, for the following reason:—

"At present the practice among analysts is, when testing butter for margarine, to take the very lowest proportion of 'soluble acids' as the standard, in order that margarine may not be erroneously reported in butter that is really pure, and in order that when margarine is really present the proportion may not be stated higher than the truth; either would be unjust to the accused. If this clause were to be adopted, however, the circumstances would be reversed, and margarine being then regarded as the genuine article and butter the adulterant, the analyst would be obliged in order that the defender might not be unjustly accused, to adopt the highest proportion of 'soluble acids' as the standard. There would be difficulty in getting either judges or agents to understand this, and the blame for this awkwardness would be laid at the door of the chemist instead of that of the Legislature.

"(b) In my opinion it is not reasonable for the framers of this Bill to seek to restrict the proportion of butter in margarine. On the contrary, it would be a tyrannical measure, and only second in unreasonableness to the prohibition of the manufacture and sale of margarine altogether, either of which would suit the agricultural interest very well, but at the expense of the public, who have an undoubted right to buy and to eat what they wish for, provided it is wholesome. The parties who are responsible for this Bill will, no doubt, seek to explain that the measure is for the protection of the public, and to prevent them getting mixtures of margarine and butter palmed off upon them as butter; but at present, Sanitary Authorities are dealing with that in a proper manner, and

have sufficient powers under the present Act to prosecute for selling *any* mixture, in *any* proportions, of margarine and butter as butter. Nothing can be clearer than that the more butter there is in margarine the better for the buyer and consumer.

"(c) There is no room for doubt that the whole object of this clause is to bolster up the agricultural interest. The measure is an agricultural one altogether, and transparently so, and, if I may be allowed to express an opinion, I think that Local Authorities who have the welfare of the public at heart should use every means to oppose it, as it is quite unsuited for the interests of the country further than promoting those of the agricultural community."

MARGARINE ACT.

Under the Margarine Act I have to report that 14 prosecutions were taken during the year, resulting in 13 convictions, and penalties amounting *in toto* to £55 10s. 6d. being imposed. The shopkeepers in this City are now extremely careful in the matter of having this material ticketed, and I believe in a comparatively short time it will be difficult to detect any contraventions of this kind.

COMMON SENSE ON MARGARINE.

EARLY in 1894 we published an exhaustive series of analyses of margarines and butters which showed conclusively the superiority of margarine over the major part of the butter sold to the public, but ignorance and prejudice die hard.

Labby takes up the parable we then enunciated.

"The fact is," says *Truth*, "that science has got the better of the cow. Butter is nothing more than the food eaten by the cow, subjected to certain internal processes, and precipitated into the milk, from which it is extracted in the form of fat. In a margarine factory the same result is effected, and the fat of cows and oxen is converted into butter without the intervention of the cow. The component parts of margarine and butter are precisely the same, with the exception of the former not containing the volatile, tasteless, and unnutritious butterine."

"That any one should pay the price of cow butter when he can obtain cowless butter for less than half that price, is an instance of the readiness with which persons every day allow themselves to be taxed for what is nothing but a prejudice. I can understand this in the case of persons to whom pence and shillings are of no importance. But that is not the case with the vast majority, and to them I would respectfully tender the advice to buy margarine in lieu of butter. Either their weekly butter bill will be reduced by more than one half, or they and their families will not have to content themselves with 'bread and scrape.'"

Margarine has established itself as cleaner and more healthful than butter, and what all who have really investigated its merits desire, is that the public should know of its superiority and buy it at its real value, because the trade in alleged butter is a swindle. How colossal this fraud in butter is a little examination of Danish butter reveals.

Consul Boyle's report on the trade of Denmark in 1898 states that last year that country produced 24,000,000 lbs. of margarine, an increase of 5,000,000 lbs. over the product of 1897. Swedish and Finnish butter to the amount of 22,500,000 lbs. was imported by Denmark, and was re-exported again by Danish butter merchants to various countries. From the statistics given it appears that Denmark last year imported butter value £1,566,667, and exported butter value £7,166,667; the export to Great Britain being £6,977,778 in value.

This enormous import of margarine into Denmark merits some examination. The wily Danes have a plausible explanation that the thrifty butter producers eat the margarine themselves in order to send us the higher priced pure butter. If this were true it would proclaim the Danes good judges of what was the better article for consumption, but it is not true. They know well that they can mix up to 20 per cent. of margarine with their butter, and no analyst can swear with certainty to the fraud, and we thus eat margarine in all Danish butter, but we pay twice the price of margarine for it. We agree with Labby that the public would show more sense if they bought honest margarine at half the price they now pay for the article sold as Danish or Brittany butter.

ANIMAL ODOURS IN MILK.

WITH the object of throwing some light upon the manner in which animal odours are imparted to milk, an interesting experiment was recently conducted by an enthusiastic dairy expert. This gentleman procured two one-pint fruit-preserving jars, washed them perfectly clean, adjusted the rubber rings, screwed the covers down, and took them to a cow-house at milking time. The air in the byre seemed to be moderately pure, probably not better than the average in such buildings. As soon as the cow was milked the jars were filled two-thirds full of the warm milk and the cover of one screwed on tightly, and the jar at once submerged in very cold running water until thoroughly chilled, then placed upon a shelf until morning. The other jar was allowed to remain open on a shelf at the back of cows until after supper, when it was closed up for the night.

In the morning both jars were shaken up, opened, and tested for odour. There could be no mistaking the one left uncovered in the cow house; it had a distinctly cowy odour. The sample which was chilled also had an odour, but not an objectionable one. Each sample was then poured into a glass flask and slowly heated. As they warmed up the opened one gave off a noticeably disagreeable odour, which entirely disappeared a little later. The other, or the chilled jar, showed nothing offensive during the heating. In fact, it gave off a rather clean, pleasing odour, such as emanates from pure milk while heating.

The indications from this single test are that the odour imparted by the cow to the milk while yet in the udder was not in this instance, at least, of such a nature or of sufficient quantity to demand aeration. The exposure of the milk to the atmosphere of the cow house for a short period only caused an amount of odour to be absorbed which made it highly desirable to remove it by some such means as aerating or heating.

Correspondence.

TO THE EDITOR OF *Food and Sanitation*.

WHAT IS MUSTARD.

SIR,—Touching on our prosecution under the Food and Drugs Act, permit us to say that the fine imposed on us did not imply that the sale of "adulterated," or more properly speaking "prepared," mustard was of a fraudulent nature, but the technical observance of a rule that a label should be attached stating that the condiment was of the nature of an admixture was not complied with. Crude mustard is never quite satisfactory to the public; it is not so mixable, and is apt to be lumpy and to run on the plate, and is snappish to the taste; hence the manufacturers prepare it with a small percentage of a special grade of flour, in all but the very cheapest quality. We are informed that the cost is not thereby reduced, and no advantage is offered to the retailer to sell the prepared article. MESSRS. Sadler, Firth and Ross, whose well-known and satisfactory "London" mustard was the article in question, inform us that very little except "genuine" mustard is now sold loose in London. The law, as administered, imposes upon the retailer either (a) the necessity of selling either an unprepared article which will not be wholly satisfactory to the public, or (b) he must accept the risk of a careless assistant forgetting to attach the gummed label next time he asked for "loose" mustard. Very few London tradesmen will now take the risk, and if we continue to do so we may be fined £50 for the second offence, though we have not the slightest interest in the matter other than the desire to meet our customers' demands. In the provinces, on the other hand, the approved article is usually sold; the power exists, but it is, as a rule, applied only where the tradesman is consistently careless or the article sold actually fraudulent. The discretion exercised by the authorities is a wise one, and the resort to the powers of the law in such matter cannot be salutary unless tempered with "saving-common-sense." We are, Sir, &c., COCKLE & SON.

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Food and Sanitation.

SATURDAY, SEPTEMBER 23, 1899.

PUBLICANS AND THE DILUTION NOTICE GAME.

MR JACKLING, the energetic Maidstone Sanitary Inspector brought to the notice of the magistrates at the last Brewster Sessions the question of the exhibition of the dilution notice and the consequent evasion of the Food and Drugs Act. In a letter to the licensing justices, Mr. Jackling said: "I beg to call your attention to the fact that in certain licensed houses in the borough the licensee

exhibits a notice in his bar to the effect that all spirits are diluted. This is, in my opinion, a clear infringement of the Food and Drugs Act, as was recently seen in the case of 'Jackling v. Cleave,' heard before the borough magistrates on July 1st and dismissed. I shall be glad if you will bring this letter before the licensing justices, so that they may have the opportunity of considering whether any license should be renewed where this notice is exhibited. I understand in many instances the licensing authority have refused the renewal of licenses unless the applicants undertook not to exhibit any such notice. I am, dear sir, yours respectfully, WILLIAM JACKLING, Inspector under the Food and Drugs Act." Mr. J. H. Bracher, representing the Licensed Victuallers' Association, addressed a few words to the Bench in regard to this matter, and contended that a publican had as much right under the Food and Drugs Act to exhibit a notice in the bar stating that his spirits were diluted as a grocer had to exhibit a label stating that his coffee was sold as a mixture. The Mayor here stated that as there was nothing before the Bench respecting this matter there was no necessity for Mr. Bracher to allude further to it. Mr. Bracher: Very well, your Worships, I thought I ought to make that explanation.

ADULTERATED COFFEE.

FREDERICK CARTER, Wheatland Lane, Seacombe, appeared at the Wallasey Police Court, on September 13th, in answer to a summons charging him with selling coffee which was not of the nature, substance, and quality demanded. It appeared that his coffees were kept in a box which was divided into four compartments and worked on a swivel. By some mistake defendant's wife had taken a packet of chicory which had been left on the counter and emptied it into what she thought was the chicory compartment. Instead of this, however, it had been put with the pure coffee. Inspector Hallard discovered the error which had been made. On August 19th, he sent a girl to purchase a pound of butter and some coffee. The inspector told Mr. Carter he had bought the coffee for analysis. He was preparing to divide it when the latter exclaimed, "You have got me this time, Mr. Hallard; this is pure chicory." He then went on to explain how the mistake must have been made. In defence, Mr. Carter told the magistrates that it was his wife's fault, she being inexperienced. Mr. T. R. Bulley, the chairman of the bench, said they had no doubt defendant's story was correct, although they thought it very careless of him to have made the mistake. There would be no conviction, but he must pay the cost of the summons.

ADULTERATED SEIDLITZ POWDERS.

At Market Harborough, on September 12th, Elizabeth Fox, grocer, Market Harborough, was charged by Supt. Leach with a breach of the Food and Drugs Act, on July 19th. Mr. W. Simpson, who appeared for defendant, said she and her parents before her had carried on business at Market Harborough for upwards of 50 years. She bought the seidlitz powders, which formed the subject of the present charge, from a well-known firm with whom she had dealt for many years, and sold them in precisely the same condition as she received them. The firm from whom she bought the powders purchased them from a London firm of high standing, and in precisely the same condition they were sold to Supt. Leach. She did not challenge the analysis, and had no reason to suppose there

was anything wrong. Defendant bought the powders at full market price, and refused to purchase off travellers who offered her seidnitz powders at a reduced price. It was a technical offence, and she pleaded guilty because she had not a written warranty, and he submitted that a small fine proportionate to the degree of her moral guilt would meet the case. The Clerk pointed out that the case was a serious one, inasmuch as it affected the public, and, as the analysis stated, seidnitz powders was a well-described drug, and a patient being ordered by a doctor to take a definite dose would, according to the sample in question, take an overdose of alkali, and not get a proper proportion of tartarate and bicarbonate. Of sodium potassium tartarate there were only nine grains in the sample, whereas it should contain 120, and of the sodium bicarbonate instead of 40 grains there were 127. The law rendered the person selling these powders responsible, and he had no doubt that if defendant dealt with a *bona-fide* wholesale house, and was supplied therefrom with the powders in question, she could recover the amount of the penalty. Mr. Simpson: That is a civil matter, with which this Court cannot deal. The Chairman intimated that the Bench would like to know whether Mr. Simpson was prepared to remove any responsibility from defendant, by advising them as to the firm from whom the powders were obtained, because if they came from a really respectable responsible firm they would take that into consideration. Mr. Simpson said that it was a criminal and delicate matter, for although the powders were supplied to his client by a respectable responsible firm, that firm got them from another firm in London, and consequently he did not think it right to fix the person who actually supplied her as the ultimate responsible person. Fined £3, including costs.

ADULTERATED CAMPHORATED OIL.

At Brierly Hill, on September 14th, Alexander Morgan, shopkeeper, Brettell-lane, was charged with selling camphorated oil which was deficient in camphor. Mr. H. Van Tromp, inspector under the Food and Drugs Act, prosecuted. On July 27th an assistant inspector bought a shillingsworth of camphorated oil at defendant's shop. The certificate of the county analyst showed that it was deficient 33 per cent. of the proper amount of camphor, and the oil in it was not olive, but mineral oil and cottonseed oil, the cost of which was much less. Mrs. Morgan said she had the camphorated oil twelve months ago, and was not supposed to know what it contained. The Stipendiary said retailers of drugs were supposed to know. Mr. Van Tromp said there was a label on the bottle warranting it as camphorated oil. The Stipendiary fined defendant 20s. and costs.

ALLEGED ADULTERATION OF SUGAR.

At Abercarn Police Court, Charles J. McCarthy, fruiterer, Newport, was summoned for selling adulterated sugar at Newbridge on August 15th. Inspector Sergeant, in the employ of the County Council for the inspection of foods and drugs, said he called at the defendant's branch shop at Newbridge on August 15th and asked for a pound of Demerara sugar. The manager supplied it to him and he paid 2d. for it. He then told him that he would submit a sample to the county analyst. A sample of the sugar was accordingly submitted to the county analyst, who returned a certificate (produced) which stated that the sugar was not Demerara, but white crystals simply dyed. Mr. Phillips, solicitor, Newport, appeared for the defence, and cross-examined Inspector Sergeant, who, in reply to questions, said that 14s. 6d. was a fair price for a cwt. of Demerara sugar. If defendant paid 15s. 3d. for a cwt. of Demerara he would be paying a very good price. The Clerk: In other words the defrauding is on the part of the wholesaler and not on the part of the retailer.

Counsel: Yes. Arthur Perkins, manager for defendant, Newbridge, said that for some time they had bought sugar from a wholesale firm in Bristol. He produced a copy of the order sent to the firm for the particular sugar in question. He also produced the invoice for the sugar, which stated that the sugar was Demerara, and supplied at a cost of 15s. 3d. The sugar was purchased for Demerara. The case against the defendant was dismissed.

ALLEGED ADULTERATION OF SYRUP.

In the Aberdeen Sheriff Court, on September 12th, Sheriff Rurnet on the bench, William Low, grocer, Dyce Village, was charged with a contravention of the Food and Drugs Acts by having on August 14th in his grocer's shop, sold to Inspector Adam one pound of syrup which was not of the nature, substance, or quality of the article demanded, in respect that it contained 90 per cent. or thereby of starch glucose syrup, which was not of the nature, substance, and quality of the article commonly known as syrup. Mr. James Younger Collie, advocate, represented the accused, and entered an objection to the relevancy. He pointed out that this was the first prosecution under the Food and Drugs Acts where subjects in bulk were disputed. There were a great many kinds of syrup, medicinal and domestic, which were made from different products. Domestic syrups were for the most part made from cane sugar, beet, and maize. The complaint was that Mr. Low sold syrup containing 90 per cent. of starch glucose syrup, but it was admitted that what was sold was syrup. The complainant should have stated that he sold one pound of syrup which was not golden syrup or some other syrup. The Sheriff: In other words, the prosecutor must define chemically before he shall charge the adulteration. Mr. Collie: No, no. There are different kinds of syrups, and it is manifestly irrelevant to charge me on this ground. The Deputy Procurator-Fiscal (Mr. MacLennan): I asked for syrup and got an adulterated article. Mr. Collie: You did not say so. Mr. MacLennan: I say it is not of the nature, substance, and quality of the article commonly known as syrup. Mr. Collie: He says he got glucose syrup, and glucose is sugar, as is well known. Mr. MacLennan: I will prove by the analyst what is commonly known as syrup. The Sheriff: I think I must take that. Mr. Collie: I think he has not stated the particular kind of syrup. He is assuming there is only one kind of syrup. The Sheriff: He defines it quite clearly as being an article commonly known as syrup. Inspector Adam stated that on August 14th he was in the shop at Dyce Village, and asked Low for one pound of syrup. He understood there was only one kind of syrup as an article for domestic consumption. He paid 2d. for it. Before he was supplied Low said: "I may tell you there is something wrong with my syrup. I don't know what it is; but I only discovered it this afternoon when a woman complained that she had got bad syrup." After getting the article witness explained the purpose for which he bought it. Cross-examined: He bought the syrup knowing it to be wrong. He had bought one pound of syrup that day, for which he had to pay 2½d. Constable Davidson corroborated. James Hendrick, county analyst, said that on August 15th, Inspector Adam handed him a sample, which he had analysed. In his report he stated that it was not a genuine sample of syrup, but contained 90 per cent. of starch glucose syrup. The article commonly known as syrup was prepared from cane sugar. He considered glucose syrup was an adulteration of syrup. Cross-examined by Mr. Collie: Is not glucose syrup extracted from any starch? Yes. What is syrup? Syrup, in the sense of the British Pharmacopoeia, is a solution of cane sugar. What is your definition of syrup? You mean in the sense of the British Pharmacopoeia or in the general sense? In the general sense. The syrups may be of sugar or otherwise, some of which are poisonous. Is glucose deleterious? No. Would you be surprised to hear that you were considerably wrong in your analysis? I should.

Would you be surprised to hear that the glucose in the sample was between 70 and 80 per cent.? I would. What percentage of water did you find? There was 20 per cent. of water. In your opinion, could golden syrup or cane syrup be made without glucose? It could, and was made long before glucose was known. In those days, I suppose, they put in chemicals which were very deleterious? They did not; I am not sure of that. What is the object of putting in glucose? In certain cases it is to prevent crystallisation. To what extent would glucose be added to syrup to prevent it from crystallising? The usual extent is about 20 per cent. I have heard of nothing like 90 per cent. By the Sheriff: Is glucose syrup at all poisonous? No; it is wholesome, and quite a good thing to take, and is cheaper than pure sugar, being made from starch. It is used as food? It is used in making a certain confectionery. Is that why sweets are so plentiful? If you represent glucose starch as cane sugar, that would be a breach of the Act? Yes; the thing in itself is wholesome. For the defence, George Murray (James Crombie and Sons) said he was a large syrup merchant, and had long experience with the sale of this article. There were a great variety of syrups, the domestic syrups being beet, glucose and cane. Glucose was extracted from maize and was largely used for domestic purposes, although it was not so sweet as the other syrups. He would say that three-fourths of the syrup sold was glucose syrup. He considered that if 12s. 6d. had been paid for one cwt. of glucose syrup 2d. per pound was a good enough profit to the retailer. Cane sugar was a little dearer. The Deputy-Fiscal: Have you ever heard of 90 per cent. of glucose being added to pure cane sugar? No, I know that it is glucose syrup that is sold mostly in bulk. John Ross, partner in the firm of George Mellis and Co., alluded to the various kinds of syrup. Cane syrup, he said, was made from cane sugar, and glucose syrup from syrup which was extracted from maize. Glucose syrup was cheaper than cane syrup, and people preferred the glucose. There was nothing deleterious in glucose, and a very large quantity of it was used as a table syrup. David Thomson, of Gordon and Thomson, gave corroborative evidence. Henry Thomas Jones, analyst, said he got a sample of glucose syrup sent by Mr. Low. His analysis of the sample showed that it contained 79 per cent. of glucose. Glucose was a little drier than cane sugar. The Sheriff dismissed the case, holding that the inspector had been supplied with the article he had asked for. Mr. Collie asked for expenses, but the Deputy Procurator-Fiscal pointed out that no expenses could be allowed under the Act. The Sheriff regretted that he could not give expenses.

WATER AT SPIRIT PRICE.

AT West Hartlepool County Police Court, on September 14th, Mrs. Mary Latimer, of the White Hart Inn, Hart, was charged with selling whisky 30 degrees under proof. Mr. Scott Elder appeared to prosecute, and Mr. A. Geipel defended. F. W. Benson, an assistant to Mr. Scott Elder, said he went to the White Hart Inn and purchased a pint of whisky, for which he paid two shillings. He left the bar with it and met Mr. Scott Elder in the porch. They returned to the parlour, and were joined by Mrs. Jones, daughter of the landlady. Mr. Geipel cross-examined the witness at considerable length, but he denied leaving the house before going into the parlour. Mrs. Jones came into the parlour before the whisky was divided. Mr. Scott Elder gave corroborative evidence. Mrs. Jones and Jane Ann White, a domestic servant, gave evidence to the effect that Benson left the house after purchasing the whisky. Defendant was fined 10s. and costs, the Chairman remarking that the Bench had made the penalty small on account of the excellent character of the innkeeper, who had kept the house for over twenty years.

AT Bangor Petty Sessions on August 15th, Jessie Clara Williams, licensee of the Britannia Inn, Bethesda, was

summoned for selling to the prejudice of the complainant, David Griffith, Weights and Measures Inspector, certain whisky which was adulterated with $7\frac{3}{4}$ per cent. of water. The defendant pleaded guilty and was fined 10s., and costs (19s.).

At the Conway Police Court, Carnarvonshire, on September 5th, William Evans, of the Royal Oak, Conway, was summoned for selling one pint of adulterated whisky, for which he paid 2s. With the licensee's consent the whisky was divided into three parts; one part was sent to the public analyst (Mr. Lowe, Chester), whose certificate showed that the whiskey had 24 per cent. of water over and above that contained in 25 degrees under proof whisky. Mr. Johnson, Llandudno, appeared for the defendant and pleaded guilty. Mr. Johnson said that the whisky was sold with inadvertence and that it was no harm to anybody to sell whisky reduced beyond 25 per cent. allowed by law. The Chairman said that for all that it was a fraud, and would treat the defendant leniently and only fine him 40s. and costs.

MILK ANALYSTS DISAGREE.

At Brixham, on September 15th, Samuel Thomas, market gardener, and milk seller, of Brixham, was summoned at the instance of Herbert James Roberts, an inspector under the Food and Drugs Act, with having on the 10th ult. sold a quantity of milk which was adulterated with 11.6 parts of added water. Defendant pleaded not guilty. P.S. Newbery proved the purchase of the milk. Mr. Roberts stated that he received the samples and forwarded one to Dr. Winter Blyth, the county analyst, from whom he received the certificate (produced), showing that the milk was adulterated with added water as stated. The defendant was sworn, and stated that he had had the third portion of the milk which was left in his possession by the sergeant, submitted to Mr. Ernest Quant, analyst, of Torquay, whose certificate said the milk was quite pure, and not adulterated, and that it contained 3.4 fat, 8.6 solid, not fat; total solids 17.0, and that the milk had not been interfered with in any way. The Bench decided, on the application of the defendant, to have the remaining sample forwarded to Somerset House for submission to the chemical officers of the Crown, the case in the meanwhile to stand adjourned.

ADULTERATED GOLDEN SYRUP.

THE London and Counties Stores, Limited, of 60, East Street, Chichester, were summoned on September 17th, for selling adulterated golden syrup. Mr. W. Parker Cogan conducted the prosecution, and in briefly outlining the circumstances of the case mentioned that it was not alleged that the syrup contained any matter or ingredient injurious to health, but that it contained to a large extent an ingredient which was not necessary to the production of the article in question. The sample of golden syrup taken in this case contained 29 parts of syrup derived from cane sugar, and 71 parts of glucose syrup, which was a cheaper and inferior article. Therefore the purchaser did not get what he expected, but a syrup made very largely from material, viz., glucose, not of such good quality as sugar syrup. Although this was the first case of the kind taken before this Court, the prosecution was by no means a novel one. P.C. Boniface proved that on July 29th he purchased 1lb. tin of golden syrup at the defendant's premises in East Street, paying threepence for it. Witness afterwards called Sergeant Rule and the manager, as well as the assistant who served the article was informed that it was intended for analysis. Sergeant Rule gave confirmatory testimony, and mentioned that while he was in the shop the manager remarked "I see they have been making a raid on this stuff all over the country." The sample was forwarded to the County Analyst, whose certificate came back on the 11th August, shewing that the article

contained 29 parts of sugar syrup, and 71 parts glucose syrup. Mr. Otto Hehner, County Analyst, formally proved his analysis. The sample contained very little sugar syrup, but a large proportion of starch glucose syrup. At the same time he analysed a quantity of other samples from West Sussex, but the majority contained pure syrup from the sugar cane. The sample under investigation was the worst he had met with. Genuine golden syrup ought to be a product from the syrup of one or other of the varieties of the sugar cane after the extraction of the crystallized sugar. The witness gave the the Magistrates information concerning the manufacture of syrup and also of glucose, which was the chief ingredient in the sample in question. Glucose was the product of the action of sulphuric acid on starch. The use of it in the manufacture of golden syrup meant the substitution of a cheaper and inferior article for a more expensive one. Starch syrup was originally added to sugar syrup because a small proportion of it, say 10 per cent. was found to impede the crystallisation of the sugar. For a good many years past, in examining samples of golden syrup, he had found them contain moderate quantities of starch glucose, perhaps 10 or 15 per cent. But as the intention was good and no fraud intended he, as a public analyst, had said nothing about it. When, however, he came to an article which was almost entirely glucose the circumstances were quite different. Glucose was only a little more than half the cost of genuine sugar syrup. It was not exactly injurious to health, but it was far less digestible than sugar syrup. Samples of the respective syrups were handed up to the Bench and tasted by some of the Magistrates. Mr. Hehner remarked that a portion of the "golden syrup" which he analysed in this case was now in a state of fermentation, a fact which did not speak well for its quality. He was emphatically of opinion that the purchaser of an adulterated sample was prejudiced because he did not obtain what he asked for and what he had a right to expect. The defendants were represented by Mr. Henry Ballard, their Chichester manager, who stated that he was instructed by Mr. Fidge, the Managing Director, to inform the Magistrates that the article was sold exactly as it was purchased from an old firm of manufacturers, and the defendants had not the slightest idea that it was adulterated. Witness had received instructions to at once withdraw the whole of the syrup in question from sale. The case containing the syrup was marked with the words "Finest Excelsior Syrup," and the article was labelled "Purest and Best." The defendants were perfectly innocent of any knowledge as to the adulteration of the article.—The Bench considered the case proved, and imposed a fine of £5, together with £5 7s. costs.

At Penbridge Police Court, Staffordshire, on Sept. 18th, William Perkins, grocer, Brewood, was charged with selling a 24b. tin of golden syrup which the county analyst certified contained 50 per cent. of glucose, a by-product of starch. Mr. Van Tromp, inspector under the Food and Drugs Act, prosecuted, and Mr. Taylor (Wolverhampton) defended. In reply to Lord Hatherton (the presiding magistrate), Mr. Van Tromp said he did not allege that glucose was injurious to health, though it cost less than pure cane syrup, and was therefore to the prejudice of the purchaser. He put in a tin which bore on the label the name of Messrs. Crosfield and Co., Liverpool. Defendant said he purchased the syrup from a wholesale grocer in Wolverhampton, and sold the tins as supplied to him. In imposing a fine of £13 and costs, Lord Hatherton said they must inflict such a penalty as would put a stop to this kind of fraud which affected the poor.

POTATOES AND POOR MILK.

At Runcorn Petty Sessions, on Sept. 18th, Joseph Walker, farmer, Hallwood, Halton, was summoned under two informations for selling milk adulterated with 3 and 4 per cent. respectively of added water. Albert Timmis, inspector under the Food and Drugs Act for Cheshire

County Council, prosecuted, and deposed to taking the first sample from a tankard as the milk was being delivered to a retailer named Mrs. Ellison. Dr. Carter Bell's certificate stated that the sample contained 3 per cent. of added water. This opinion was based upon the fact that the sample contained only 8.2 per cent. of non-fatty solids, whereas normal milk contained at least 8.5 per cent. of non-fatty solids. Dr. Carter Bell was called, and said the fatty solids in the samples were 2.86 per cent. The percentage of total solids in ordinary Cheshire milk varied from 12.5 to 14 per cent.; in the present case the percentage was 11.06. In estimating added water he made every allowance for the milk being naturally poor, and it was clear to him that water had been added in this case. He had analysed a sample of milk taken direct from the defendant's cows. Mr. Burton objected that the taking of this sample had not been proved. The Bench upheld this contention, and Dr. Carter Bell was therefore not allowed to give the results of his examination of this sample. Dr. Carter Bell was cross-examined at great length as to variations in milk from different cows, and as to the opinions of experts. Witness said he had analysed over 10,000 samples of milk, and he should know something about it. He had a standard which was the same for summer as winter. Mr. Burton, for the defence, said at the time the sample was taken the cows were being fed on potatoes, and that was why the milk was poorer than usual. The cows had previously been fed on corn and cake. The defendant, called, confirmed this statement, and denied that any water had been added to the milk. Charles Mountain Blades, analytical chemist, Northwich, deposed that he had fifty years' experience as an analyst. In the spring months milk was at the lowest ebb, chiefly owing to the grass being young and full of watery juice, but with the grass more matured milk attained its highest point in May and June. In July and August there was again a heavy depression in milk, because of the pastures being dried up. Cows fed upon potatoes would be likely to yield milk low in non-fatty solids. Charles Percival, farmer, Norton, said potatoes affected the quantity and quality of milk. Defendant, recalled by the Bench, said he had used potatoes for the cows all summer, but at the time in question he gave no cake along with the potatoes. Fines of 40s. and costs £2 16s. 8d., total £4 16s. 8d., and of 1s. and costs in the second case were imposed.

PRESERVED PEAS.

At Spelthorne on September 11th, Petty, Wood, and Co., wholesale grocers, 41 to 57, Southwark Bridge Road, S.E., were summoned by Inspector Tyler for having unlawfully and wilfully given to Budgen & Co. (Limited), provision dealers, Staines, and elsewhere, a label for a certain article of food, to wit, green peas, sold by them, the said label falsely describing the article sold. Mr. Wontner appeared for the defence. Inspector Tyler said the information was laid under Section 27 of the Act, and he submitted that it was the only section by which it was possible to reach the wholesale dealers in a case of the kind. Proceedings for selling the peas in question had been taken against Messrs. Budgen & Co., who were before the bench on July 21st last, when there was a conviction, with leave to appeal. The certificate of the county analyst stated that the peas were coloured with copper sulphate to the extent of 2.4 grains per pound, and evidence was given by Dr. C. Dwight Morris, who was now present, and whom he proposed to again call to speak to the deleterious nature of the peas as an article of food. Replying to Mr. Wontner, after giving formal evidence, Mr. Tyler said he had had considerable experience with such prosecutions. He had had one other case in which the wholesale dealer was the defendant, but he had been the first inspector in the country to move in this direction. The previous case related to seidlitz powder, and there was a conviction, the defendant pleading guilty. He considered that the label now in question falsely

described the nature of the goods, which, instead of being very good, or of superior quality, were, in his view, very bad as an article of food. He had no doubt whatever that Petty, Wood, & Co., were traders of the highest respectability. He had made no inquiry of them as to where they obtained the peas: he had not communicated with them on the subject in any way. He knew that the question as to the proportion of sulphate of copper that was injurious to health had been strongly discussed, and that the matter was at the present time the subject of inquiry. The sale of such goods, however, was still going on. He had purchased for analysis preserved peas sold by Messrs. Crosse & Blackwell, and the certificate stated that they were not adulterated. Addressing the bench at this point, Mr. Wontner said his clients were anxious to have the matter properly and satisfactorily threshed out, but, considering the efforts already being made in that direction, he thought it hardly the time to institute a prosecution of this kind. If the magistrates came to the conclusion that it was a case for conviction, the Court of Appeal might hold that the summons was bad by reason of proceedings having been taken under the wrong section, and in that event a great deal of expense would have been incurred without any good result. He submitted that the information should have been laid under the 3rd Section of the Act, and intimated that if the proceedings were going on he would have to ask for an adjournment to get expert evidence in opposition to that for the prosecution. Tyler submitted that if proceedings were not taken under the 27th Section retailers might be convicted, while eminent wholesale firms altogether escaped for wrong-doing, unless a remedy against them was sought in a civil court. The magistrates adjourned for luncheon at this stage, and on their return the Chairman said they had considered the matter in the interval, and the majority were of opinion that proceedings had been taken under the wrong section. Therefore the summons would be dismissed. Mr. Tyler: Only one witness! Mr. Wontner: Surely your opening was good enough, Mr. Tyler; you told us everything you were going to prove. Mr. Tyler (to the bench): I shall ask you to consider that I have tendered the witnesses. The prosecution has not closed its case. The Chairman: We came to the conclusion it was a wrong section. Mr. Tyler: I formally make application for a case, so that I can report having done so to the County Council. The Clerk: There is no question of law. The Chairman: The only course now is for the County Council to get a superior court to grant a mandamus against us, and I hope they will be successful.

MARGARINE AS BUTTER.

At Bolton Borough Police Court, on Sept. 15th, James McGrath, 13¹/₂, Derby-street, Bolton, was summoned for selling margarine for butter, and with supplying margarine in a wrapper not bearing eligible letters setting forth that it was margarine. Mr. J. H. Field, Deputy Town Clerk, prosecuted, and Mr. Horridge was for the defence. Mr. Field explained that defendant was an assistant at a shop called "The Irish Market." The prosecution had made every effort to get at the owner of the business, a Mr. Whitney, but the police had failed to serve the summons on him. Whitney had already been fined £20 for a similar offence. They therefore proceeded against the assistant, believing that if he was fined the master would pay the penalty. Inspector Spencer, through a woman, secured a pound of "best butter" from the shop in question, for which 9d. was paid. McGrath served the same. On being submitted to analysis this "best butter" was found to contain 53 per cent. of fats foreign to butter. Mr. Horridge, for the defence, explained that McGrath was only the shop boy, and during the temporary absence of the manager, supplied the articles in question. He pleaded guilty to the selling of the article, but contended in the second case that McGrath was not a dealer within the meaning of the Act. A fine of £10 and costs, with the

option of three months, was imposed for selling butter to the prejudice of the purchaser. The other case was dismissed.

At Wednesbury, on September 12th, James Spittle, who was described as an importer of foreign eggs and butter, residing in Albert Street, Wednesbury, was summoned for delivering margarine which was not marked or branded in accordance with the Margarine Act. Mr. Willcock prosecuted, and stated that the defendant supplied goods to small traders, and as the offence with which defendant was charged was of a flagrant character he deemed it to be his duty to ask for a substantial penalty. Mr. Thursfield, who represented the defendant, pleaded guilty. The evidence for the prosecution was that on August 14th Samuel Toy went to the grocer's shop of Mrs. Jane Massey, Birmingham Street, King's Hill, and purchased half a pound of what he believed to be butter. This was found to contain only 7 per cent. of real butter fat. Mrs. Massey stated that she gave the defendant an order to supply her with twelve pounds of butter, and tendered 9s. 6d. in payment. The stuff was delivered by defendant himself, and was wrapped in plain paper which was not marked or labelled in any way. She sold the stuff to the inspector believing it to be butter. By Mr. Thursfield: She gave an order for butter believing she would be supplied with butter. Mr. Thursfield, for the defence, said the defendant admitted his mistake, but urged that Mrs. Massey knew perfectly well that she was buying a mixture of butter and margarine. The Stipendiary: Mrs. Massey, under any circumstances, would expect more than 7 per cent. of butter. Mr. Thursfield: My instructions are that there was a little arrangement between them. The irregularities, however, will not occur again. Mr. Willcock: According to that statement it was not a mistake that margarine was supplied but a deliberate act. That makes the case much worse. The Stipendiary said it was a most flagrant case of fraud. The defendant was a man who supplied small provision dealers with their goods, and by his fraudulent acts might have got them into serious trouble. In fact he had got Mrs. Massey into trouble, for she was summoned for selling margarine for butter. Mr. Willcock: We propose to withdraw the summons against Mrs. Massey, with your worship's permission. The Stipendiary: I think that summons should be withdrawn, for the woman bought the article believing it to be butter. Mr. Willcock: That is so, and she has sworn to the fact. The Stipendiary said it was necessary small grocers and provision dealers should be protected, and fined defendant £20. Defendant: I cannot pay the fine. The Stipendiary: Then your goods will be distrained upon. Defendant: I have no goods at the present time. The Stipendiary: Then you will be imprisoned for two months.

At Wallasey on September 13th, William H. Brooks, of Liscard Village, was summoned for selling margarine which was not enclosed in a proper wrapper. Inspector Hallard said he sent a girl into the defendant's shop to buy some "cooking" butter. She made the purchase, but told him that the butter had been wrapped in a plain paper, and that the defendant had written on it "cooking." The inspector saw Mr. Brooks, who said he had not put it in a margarine wrapper because he had none left. He did not mean to sell it as butter at all. Defendant now stated that while he had been on his holidays he had run out of margarine wrappers, so he just marked the paper "cooking." He had no intention to deceive. The Bench imposed a fine of 10s. and 14s. 6d. costs, and the Chairman advised the defendant to be more careful in the future. Margarine should not be sold as cooking butter.

At Rowley Regis, on September 13, Joseph Rock, grocer and provision dealer, Elbow-street, Old-ill, was fined 30s. for neglecting to label a packet of margarine exhibited for sale in his shop on July 17th. The defence was that no attempt was made to deceive the public, and that the label attached to the parcel had accidentally fallen down.

THE ALLEGED UNSOUND FRUIT.

At Newington Sessions last week, Mr. W. S. Carmichael, secretary to Lipton's (Limited), was indicted for having had in his possession at Lipton's jam factory, Bermondsey, a quantity of fruit which was intended to be used for human food, and which was unfit, unsound, and unwholesome. The indictment contained 27 counts, and Mr. Carmichael pleaded not guilty. Scientific and practical evidence having been heard the Chairman found the charges proved, and imposed upon Mr. Carmichael a fine of £50, with the alternative of two months imprisonment. It is said that more will probably be heard of this case, as Lipton's are not satisfied to accept the Sanitary Inspector of Bermondsey as an infallible authority on fruits, fermentation, and jam-making.

WHY DOES A WOMAN'S TONGUE LAST LONGER THAN HER TEETH?

THIS question is not original with me. It was asked by the writer's associate in a correspondence with Dr. Eugene S. Talbot of Chicago, Secretary of the Section on Stomatology of the American Medical Association, on so-called pyorrhea alveolaris, which resulted in his preparation of a paper for said section on "Stomatology," which I presented to Dr. Talbot at the Columbus meeting in June. I shall use a little of the matter in said paper.* In fact what I have to say here is simply as a witness.

Why should the tongue last longer than the teeth? Made up of a complexity of tissues, used three times a day in eating, endowed with fine nerve filaments, and having an extra amount of work as to speech, it would appear as if the tongue should degenerate as soon as the teeth, with their hard and dense structures firmly implanted in the bone. But we find that the tongue is rarely diseased, and in my personal experience I know of cancer occurring only twice and both times in men, so some might say that a woman's tongue is even harder to destroy than a man's.

But there are reasons why the teeth do degenerate, and it is a fit subject of physiological chemistry to be here considered.

First.—Lack of Nutrition.—Feed the human properly and the teeth will not decay under ordinary circumstances. This has been demonstrated very thoroughly, and yet it is little considered or employed. The attention of my associate in medicine twenty-five years ago, was called to the early decay of his children's teeth, and after considerable study he ascribed it to the feeding so much on white flour and sugar preparations, and placed the members of his family on whole-wheat preparations, with the result of stopping the decay, his children grew on to maturity with fine teeth, and those which had decayed and had to be filled held very well and far beyond the length of time expected by the dentist. This was so in my own case, carrying one tooth thirteen years when the dentist expected it to last but one. The teeth of the members of this family always responded well to treatment.

The action of food on the teeth is further demonstrated in the treatment of chronic diseases and even in such grave conditions, as tuberculosis, in which there has been repair of the tissues, even of the teeth, to the amazement of the dentists attending the cases. Children improperly fed from infancy, cut their teeth with trouble, and they early decay. This part of the subject can be illustrated in agriculture, where the feeding to the soil of plenty of soluble salts has arrested the development of vegetation on peach trees, there having been given enough force to withstand the operations of the vegetations which would have destroyed the trees.

This brings us to the second part of our subject, to wit, the decay from the outside. I am not a dentist, and am not accustomed to the technical details of their work,

and can only approach this subject as a witness in certain lines and on general principles as a student and practitioner of medicine. In the paper referred to in the foregoing, the writer spoke of decay as being from endogenous causes, that is, from within, and exogenous, that is, from without. I now propose to look at the exogenous causes and its treatment, for I have already shown in the first part that proper feeding would so tone up the structures that they are able to resist the decaying influences which are generally about them; it appears there are means which can be employed to reinforce the strength given from within greatly to the benefit of those concerned. About a year and a half ago, one Sunday after church, I called on a friend whom I had missed at the service. I found him and the members of his household very thoroughly upset. He had been suffering for several days from toothache, could not eat, had had but little sleep, and was sitting in a chair in a condition fit for nothing that was useful or beautiful. I looked at his mouth and found that one of his incisors was loose and about the root was an abscess. I said to him, "Why do you suffer this way?" He replied he was going to have it out as soon as he could get to a dentist, but thought he could not find one before Monday. I told him that if he would come over to my house I would take the tooth out, and he promptly acquiesced. Now, tooth-pulling, called by the more fashionable name of extracting, is not the common work of physicians, but years ago doctors had to do such things. So I hunted up the instruments that my father and grandfather had used, and injecting some cocain about the gum tissues, I soon pulled the tooth out without pain and to the great relief of the patient. There was a profuse abscess about the root of the tooth, and there was decay along its outer surface from above the gum to the point. My friend then went on to say that he expected to lose more of his teeth and in time to have a plate on the lower jaw. About six weeks ago he came one morning with a bottle of cocain in his hand and said he had come for me to pull two teeth. I found two more incisors in the same condition which the first had been in, and removed them. These two teeth exhibited a decay from above downwards to the end of the tooth. There were not so much of abscesses around the covered tissues as in the first instance, but they were exquisitely sore and tender and also more or less loose. He then said "There is another one that is loose which I will have taken out very soon. In fact, they are all to go and then I will have a plate, sure." Some weeks before this the writer's associate had commenced to make some studies of the effect of hydrogen dioxide on teeth. Some teeth which he had removed from himself under the same conditions as my friend, and which he had kept, he put in the hydrogen dioxide, with the result of thoroughly bleaching the teeth and killing of the vegetations. From his examinations he finds that the bacteria composing the vegetations found on the teeth are the most virulent and lively of any he has ever seen in the use of the microscope since 1850. He describes their action as a decaying of the tissues of the teeth and depositing carbonate of lime like coral is deposited in coral islands, and this degeneration of tissue and abnormal deposit creates the abscess, the pyorrhea alveolaris (the flowing pus of the alveolar cavity), and of all poor terms, it certainly is the poorest, because it simply describes a result and not a cause. My associate then tested hydrogen dioxide on his own teeth and is never without it now. I suggested to my friend to use some, and see if he could save that tooth, which was already becoming loose, and perhaps the others. In a few weeks' time he reported to me with delight. He said, "Look at my tooth! See how white and firm it is," and to my surprise I found it perfectly firm and clean and white. Now, the practice in his case had simply been to place the pure hydrogen dioxide in the mouth and scrub the teeth with a tooth brush.

Further study with this preparation leads me to conclude that it is exceedingly valuable in killing off the cause of decay which makes a woman's teeth last a much shorter time than her tongue.—John A. Rutter, M.D.

* So-called Pyorrhea Alveolaris. Ephraim Cutter, M.D.

BEEF MAKES THE MAN!

"I PREDICT that in five years the quality of cattle will have so increased as to be beyond the expectations of the most sanguine," said John McCoy before the Kansas and Missouri Shorthorn Breeders' Association. "In fact, the wonderful reformation is already shown in the young stock on the ranges, and is a revelation to those who have handled that class of cattle. By their fruits ye shall know them, and one has only to watch the shipment of cattle from the great breeding grounds of Texas, New Mexico and Arizona for the next three years to get an idea as to what the Shorthorn has done for the breed and for humanity. Some one has said that the literature of a people was an index to its character. The literature and press of a country may mould the character of its people, but

HE WHO PROVIDES THE BEEF

supplies the brain and culture of the author or editor. Give me the power to select the beef of a people, and others may choose its literature, or its armies, for with pure, high-bred, wholesome beef I will produce the brains, the culture and the development of the one and the bravery, the manhood, the endurance and the patriotism of the other. Good, wholesome, pure food is an essential for the development of the nation. As breeding and the purity of our meat products develop, in the same ratio will we increase in intelligence, culture, refinement, prosperity and commercial importance. England, which holds the proud title of mistress of the seas,

THE FOREMOST COMMERCIAL NATION

of the world, also holds the title of beef-eaters. The land of the beef-eaters, the birthplace of the Shorthorn, produced her Gladstone and her Beaconsfield, her Bacon and her Byron. England is practically the only European country to-day that freely admits our beef. Erratic France opens or closes her doors, according to the crop yield of that country, and the agrarian party in Germany holds the key to her door, refusing to open on the flimsy pretext of disease. Countries of lesser importance follow the lead of the two larger. The

FLIMSY PRETEXT OF DISEASE

is so unwarranted as to merit the condemnation of the whole American people. I therefore venture to suggest that the only dark cloud that hovers over your deliberations, as it is the only cloud that partially dims the otherwise brilliant future of the cattle industry of the whole country, is foreign embargoes on American meats—the purest and best—made so by the most glorious sunshine, the purest water, the sweetest of grasses, the richest of corn, grown in God's choicest garden. I am a believer in destiny. I am an optimist. I believe the world is growing better in commercial, scientific, social and religious conditions gradually nearing the high plane of perfection, the consummation of Omnipotent's earthly plan. To reach this plane the body, the mind and the character of man must develop, and one of the potent factors in this development is pure wholesome food. There is no time when a man feels so inclined to say 'peace on earth and good-will towards man,' and is so inclined to 'love his neighbour as himself,' as when arising from having eaten a good, rich, juicy steak from a pure-bred Shorthorn."

MR. C. A. SEYLER, analyst to the Glamorgan County Council, reports that during the past quarter he has examined 250 samples of food and drugs, of which 13·2 per cent. were adulterated. Of twenty-three samples of butter, seventeen were genuine, but six contained boric acid, though not in amount exceeding the limit of 0·5 per cent. Genuine sago, he says, appears to be now oftener supplied instead of substituting small tapioca. The colour of the sago has also improved. Of seven samples of Demerara sugar sent, two consisted of white crystals dyed with some aniline dye.

RIPENING PROCESS OF CHEESE NOT DUE TO BACTERIA.

DR. E. W. ALLEN, Assistant Director of Experiment Stations in the Agricultural Department, has just returned from a prolonged tour of the West, made for the purpose of inspecting the various stations in that section of the country.

He states that one of the most interesting lines of investigation, which is being pursued in these stations, is that with regard to cheese-making. The station in Wisconsin is taking the lead in this especial work, and discoveries have been made there which revolutionizes the European theory that the ripening of cheese is due to bacteria. The American experiments demonstrate beyond doubt that the principal change in the albuminoids which takes place in the ripening process is dependent upon the ferment which is contained in the milk itself, and not to the bacteria. It is believed that this discovery will have an important bearing upon cheese-manufacture in the future.

IS THIS MORE BRITISH ANALYTICAL CONTROL?

A CIRCULAR has been issued, says the *Financial Times*, by someone masquerading under the pseudonym of "A Friend of Dairy Farmers," advocating the formation of an independent Dairy Farmers' Co-operative Protection Society with a view of preventing the sale and adulteration—if we may be allowed the expression—of whole milk with the separated article—in other words, skim milk. It is stated that farmers only receive 6d. per imperial gallon for whole milk, while separated milk is bought at 4d. a gallon, which is retailed to the public (mixed with whole milk) at 3d., and even 5d. per quart, thus returning to the retailer some 500 per cent. profit. The farmers' complaint is that the result of this adulteration is that they get too low a price for their whole milk, and they naturally want to get some of the 500 per cent. profit by putting a stop to the practice. The proposition is that they should combine not to sell milk to well-known regular buyers of separated milk except through a "central salaried detective agent of their own appointment," whose salary would be provided by the Independent Dairy Farmers' Co-operative Society, while to spur him on to further exertions it is suggested that he be paid in addition "five guineas for every conviction upon prosecution for such practices that he got the Vestry authorities to institute." The suggestion opens up a vista too wide for contemplation. It is difficult to see how the unfortunate official, overburdened with such a weighty designation is to visit all the dairy shops in London, but our sympathies are with the Vestry authorities, whose lives are likely, under the circumstances, to be made a burden by the energetic detective who wishes to increase his salary.

CORONER'S JURY AND CONDENSED SEPARATED MILK.

MR. BATE held an inquest at Wybunbury, near Nantwich on September 16th with respect to the death of a five weeks' old infant, the child of a single woman named Elizabeth Chesters. The evidence showed that the child was at first fed on cow's milk but its diet was afterwards changed to condensed whole milk and finally to condensed separated milk. Dr. Turner, of Nantwich, who made a postmortem examination, said the body weighed only 5 lbs. 9 ozs., there being an entire absence of fat in the body. Death was due to exhaustion, the result of improper or insufficient feeding. Condensed separated milk was of no nutrient value. The jury returned a verdict that death was due to improper or insufficient feeding. At their request the coroner severely censured the mother, and in pointing out that the child had practically died from starvation, said the jury had taken the view that she had acted in ignorance.

BRISTOL GROCERS TAKE A SENSIBLE COURSE.

THE controversy upon the Food and Drugs Bill during its passage through Parliament is too fresh to need recapitulation. One point upon which the grocers' organisations throughout the country strongly urged amendment was that with regard to a warranty of the purity of goods. Their contention was that an invoice ought to constitute a warranty without any specific guarantee. Parliament, however, did not accept this view, and hence traders have for their own protection to continue to obtain a written warranty from the wholesale houses. In the rush of business life this is frequently overlooked, and, with a view to prevent difficulties of this kind in the future the Bristol Grocers' Association has, at the suggestion of its President, hit upon the device of issuing to members printed slips, one of which, it is suggested, should be sent back with any invoice not bearing the required certificate of purity. The slip briefly explains the legal requirement, and places the whole matter upon a business footing. Other grocers should copy this sensible procedure.

COCKLES AND TYPHOID.

"A MIXTURE of sea water and untreated sewage" does not sound tempting as a beverage, says the *Western Morning News*. Although cockles may thrive upon it, as they do at Exmouth, it is only what one expects to find that the cockles themselves are "not fit for food when raw." None too soon the sale of shellfish in that state has been stopped at Exmouth. Probably people will be disposed to look askance upon them if cooked, considering that 70 out of 80 cases of typhoid have been traced to the eating of them uncooked. The vigilance of the Exeter and Exmouth authorities in this matter, now at last their attention has been called to it, is of course praiseworthy, but if it be true that cockles are still being sent away to other places, there is clearly something more for somebody to do in order to have such a practice stopped altogether. Exeter City Council has wisely lent its support to the proposal of the Devon County Council that the whole of the estuary of the Exe should be declared a stream within the meaning of the Rivers Pollution Act. The greater powers should mean greater purity and less danger to public health. The direct result will probably be that Exmouth will have to find some other means of disposing of its sewage than discharging it in a crude state on a spot where its effects are so deleterious.

THE OYSTER SCARE.

OYSTER lovers will rejoice to learn, says *The Globe*, upon the authority of a Parliamentary Blue Book, that their favourite delicacy has been to a great extent relieved of the reproach which has long lain upon it as a transmitter of typhoid. According to the evidence of experts, it seems that the typhoid bacillus cannot possibly be communicated by the flesh of the oyster, though the germ may be mechanically suspended in the gills. The intestine or the liquor might contain the bacillus, on account of the oyster having been in an infected bed, but the organism of typhoid does not live long either in the intestine or the liquor, and an artificially infected oyster will get rid of the infection in ten days if placed in pure water.

MR. WALTER LONG AND THE GROCERS.

There seems to be a hopeless disagreement between Mr. Walter Long and the grocers as to the invoice warranties question, and Mr. George Bolton, the chairman of the Committee of the Birmingham Grocers' Association has sent a long letter controverting Mr. Long's recent statement. Mr. Bolton asks that all cases under the Food

and Drugs Act should be heard by stipendiary justices, who alone, Mr. Bolton implies, can unravel the intricacies of the law. Grocers have great difficulty in inducing the wholesale dealers to send warranties or to write warranties on the invoices; and the suggestion that grocers should compel the dealers to give warranties by withholding their custom has been shown by experience to be impracticable. "There is one law for the retailer and another for the wholesale dealer," says Mr. Bolton, for a simple statement by the retailer is adopted and taken as a specific warranty, whereas an invoice by the wholesaler is not in any sense a warranty unless it is clearly shown that it was the intention of the wholesale dealer to warrant.

THE BOARD OF AGRICULTURE AND MILK EXTRACT.

GREAT dissatisfaction is felt, says the *Daily Telegraph*, by the members of the East Kent Chamber of Agriculture and others interested in the dairy industry on the subject of representations which have been made to the Board of Agriculture regarding the use of a substance known as milk extract, which is alleged to be in common use at the coast towns. The Board of Agriculture has reported that, on examination, the substance passed muster, and they could not legally stop its sale. The Chairman of the Chamber, Mr. W. W. Berry, points out that the substance is used to enable dairymen to make 500 gallons out of 400 gallons of milk, and that the mixture of milk, hot water, and extract is sold to the British public as natural milk. That appeared to him to be contrary to the spirit of all legislation on the question of the adulteration of milk. If the Board of Agriculture could not do anything to stop this sort of thing, he thought they wanted further powers. The matter is now to be brought before the British Dairy Farmers' Association, with a view to pressure being used on the Board of Agriculture.

Correspondence.

TO THE EDITOR OF *Food and Sanitation*.

THE COST OF ANALYSING SAMPLES.

SIR, - On August 24th we wrote as follows to the Local Government Board: - "In the new Food and Drugs Act, Section 14, it is provided that samples of food may be taken by an inspector at the request of the buyer after the goods have left the vendor's shop. We shall be pleased if you will kindly inform us at whose expense the analysis of such goods will be made, as there is a great deal of uncertainty in the trade on this matter."

In reply to this we received the following letter from the Local Government Board: - "I am directed by the Local Government Board to advert to your letter of the 24th ult., and, in reply, I am to state that samples of food procured for analysis pursuant to the provisions of Section 14 of the Sale of Food and Drugs Act, 1899, must be dealt with as provided by Section 3 of the Sale of Food and Drugs Act Amendment Act, 1879. Under this latter section it is the duty of the officer who takes samples of milk in course of delivery from the wholesale dealer to the retailer to submit the same to the public analyst in like manner as if he had purchased the same from the seller under Section 13 of the Sale of Food and Drugs Act, 1875. The cost of the analysis will be borne by the local authority, whose officer procures the samples."

Thinking it may be of some interest to your readers I am sending a copy of this letter to you for insertion in this week's issue.

I am, &c.,

P. FIELDEN (For Willer & Riley, Ltd.).

58, Stanley Street, Liverpool, Sept. 13th.

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Food and Sanitation.

SATURDAY, SEPTEMBER 30, 1899.

MILK WITHOUT CREAM.

The Effect of Food on the Quality of Milk.

At the Ramsgate Police-court, on September 12th, before Mr. H. B. Hammond (in the chair), Messrs. S. R. Wilson and H. Weigell, Edward Boddington, farmer, of High Halden, was charged with selling milk at the S.E.R. Station, part of which had been abstracted so as to affect injuriously its quality, without making disclosure of such abstraction, on August 21st. The Mayor (Councillor J. B. Hodgson), Alderman W. P. Blackburn, and P. S. Emett, were also on the Bench, but did not adjudicate in this case.

Mr. W. A. Hubbard (Town Clerk) opened the prosecution on behalf of the Corporation. Mr. William D. Miller (Inspector of Foods and Drugs) deposed that on August 21st, between 11 and 12 noon, he paid a visit to the S.E.R. Station, and there saw a number of milk churns standing on the arrival platform. He took a sample from one of the tins, which was consigned "E. Boddington (Pluckley) to Abbott Bros. (Ramsgate)," and submitted it to the Public Analyst, whose report showed the milk to be less 18 per cent. of cream or fat, and that it did not contain the required 3 per cent. of fat. Mr. Sydney Bruce Allan (manager to Abbott Bros., milk dealers, Queen-street), said his firm had a contract with defendant for the supply of milk. He examined the milk frequently, and had on several occasions found cause for complaint, the milk being very poor at times. He had been compelled to complain of the poor quality of defendant's milk to Mr. J. Abbott, who had instructed him to lay a complaint with the head office at Newcross, and to inform the Inspector of Foods and Drugs on the subject. Defendant denied having received any complaint as to the poor quality of his milk from Abbott Bros., and put in a letter he had received from them asking him to renew his contract with them for the supply of milk. The letter was dated September 1st, 1899. Mr. J. Abbott was then called to prove having received a complaint from his manager as to the quality of defendant's milk, and corroborated the evidence of Mr. Allen upon that point. He was confident that defendant must have received a complaint from the head office, and if the case was adjourned he would be in a position to produce the letter book. Defendant denied having received any complaint. Defendant, on oath, said he was a farmer carrying on business at High Halden. It was almost an impossibility for him, as he would try to prove, to have abstracted this cream from the milk. During the recent hot weather they had been compelled to send milk away twice each day. There were only two ways he could have separated the cream, either by using a separator, or by putting the milk up in creaming pans. He had not got a separator, and to put the milk up in pans it took twelve hours for the cream to become solid, and that added to the twelve hours taken in transit would make twenty-four, and by that time the milk would be sour. Therefore, he contended, it was impossible that he could have abstracted the cream, whilst if he put the skimmed milk amongst the unskimmed it would turn the whole lot sour. He then read an article from an agricultural paper showing the difference in quality of different milk upon being submitted to analysis, and showed that out of two samples analysed, one sample only contained 2.70 per cent. of fat, whilst the other sample contained 3.65 per cent. of fat. The quality of milk depended largely upon the diet of the cows, and was much affected by climatic change. During the drought the grass had been dried, and he had been feeding his beasts for some time past upon brewers' grain, and he accounted for the poor quality of the milk on that score. If Abbott Bros. were prepared to pay him more for his milk, then he would be able to afford to feed them on richer food. The milk when sent out by him contained all the cream as given up by the cow. The Chairman said they must treat him in the same way as the previous defendant, and he would be fined £5 and 14s. costs, or in default 21 days' imprisonment. He was bound to supply milk of a certain quality, and if the milk was not of the required quality, then he had to give notice of the fact. Defendant said he could not pay then, and the Bench allowed him a week in which to pay the fine.

A MILK MYSTERY.

At Smethwick Police Court, on September 20th, James Williams, dairyman, High Park Road, was summoned for selling milk in an adulterated state, and from which 13 per cent. of its original fat had been abstracted on the 5th July. Mr. Harold Van Tromp

(Inspector under the Food and Drugs Act) said that there were two summonses, but he only asked for a penalty in one case. Leonard Parkes, an assistant of the inspector, deposed to buying a sample of milk from defendant's shop, and Mr Van Tromp produced the analyst's certificates as to the adulteration. Mr. Van Tromp said that on September 2nd, he went to see the cows milked, and took a sample of the milk which was certified as genuine by the county analyst. Mr. Sharpe: You don't know whether the cow knew you or not? (Laughter). Mr. Van Tromp: It was very friendly. (Renewed laughter). Mr. J. S. Sharpe said his client was astonished to receive a summons, as he knew the milk had not been tampered with. It was his desire to have some milk taken direct from the cow by the inspector in order to see whether it corresponded with the other sample. He reminded the Bench that milk varied, and mentioned that defendant had kept cows for 12 years. A fine of 20s. and costs (£2 15s. 6d. in all) was imposed.

At Worship-street, on September 21st, James Fletcher, milk dealer, of St. Anne's Dairies, Limehouse, was summoned before Mr. Cluer, by the sanitary authority of Poplar, for selling milk adulterated with 11 per cent. of water. Mr. W. T. Ricketts, solicitor, defended. Mr. G. H. Young representing the sanitary authority. It was proved by Sanitary-inspector Boyce that he made a purchase from a man in the defendant's employment serving a round in Bow-road, and submitted the milk to the public analyst, whose certificate showed the adulteration stated. Mr. Ricketts, for the defence, cross-examined, and called witnesses to show that on receipt of the information that the milk bought by the inspector was adulterated, the defendant, as the employer, had his servant watched. It was then found that the man was in the habit of obtaining water at a house in Burdett-row, Bow, and a can was found there containing two quarts of water. The man was instantly discharged. Mr. Ricketts submitted that the inference was irresistible that the milk was adulterated by the servant, and called the defendant to prove that the milk was bought under warrant as pure, and sent out as received. Mr. Cluer thought that it was not a case in which the vestry should have prosecuted, but as the defendant was technically liable, he ordered him to pay 12s. 6d. costs, dismissing the case under section 16.

At North London Police Court, Frederick Turner, of Pool-road, Clapton, was summoned for selling as pure milk an article to which the public analyst of Hackney said 5 per cent. of water had been added. Mr. H. T. Tiddeman prosecuted, and Mr. Ricketts defended the accused. The milk, he said, was sold as received from the farmer. There had been no previous conviction; and Mr. Cluer fined the defendant 20s., and 12s. 6d. costs.

At the Borough Court at Portsmouth, on September 19th, an adjourned charge of adulterating milk was proceeded with against George Loader, of Higher Farm, Preston. The sale was said to have been to the prejudice of the South-Western Dairy Company, of Commercial-road, Landport, to whom the milk was consigned on the 10th of July, on which day a sample of the milk was taken for analysis from a churn at the railway station before it had reached the Company. The analysis made by the Borough Analyst showed that the sample was adulterated with water to the extent of 3·7 per cent., but there was a negative certificate from a London analyst to the effect that the milk was pure. In this difference a third analysis had since been made by the authorities at Somerset House, and that certificate was that the milk was adulterated with water to the extent of five per cent. The magistrates held it to be such a bad case, that they not only imposed a fine, but they granted three guineas costs to the prosecuting solicitor. The defendant was fined £5, together with the costs and the solicitor's fees, £10 1s. in all; or, in default of distress, one month's imprisonment.

ADULTERATED GOLDEN SYRUP.

At Horsham, on September 23rd, Arthur Miller, of East-street, Horsham, was summoned under the Food and Drugs Act with selling 1 lb. of golden syrup, which was not of the nature and substance demanded. Defendant, who was represented by Mr. Henwood, pleaded not guilty. Margaret Parsons, a young girl of Victoria-street, Horsham, deposed to purchasing 1lb. of golden syrup for 2½d., being served by the assistant. Sergeant Parsons, father of the last witness, stated that he sent his daughter for the syrup. He afterwards called at the defendant's shop and told him that he purchased the syrup for the purpose of it being analysed by the public analyst. While dividing the syrup the assistant came in. Defendant said to him, "What have you sold it for?" the assistant replied, "Golden Syrup, sir." Defendant said you ought to have seen me before you sold that for golden syrup." The assistant replied, "You have been selling it for golden syrup ever since I have been here and so have I." Cross-examined: There was quite a tiff between defendant and his assistant when he spoke to defendant about the syrup. Superintendent Bryne produced the analyst's certificate, which stated that 56 parts were of pure sugar, and 44 of glucose starch. Mr. Henwood said defendant would accept the certificate of the analyst, but pointed out that Scotch Magistrates had 90 per cent. of glucose starch in cases before them and then had dismissed the case. Defendant went into the box, and said he had been in Horsham for twelve years. Witness did not remember telling the assistant that he ought to have seen him before selling the article as golden syrup. The syrup in the bottle had been sold as golden syrup, and witness quite believed it to be golden syrup. He sold it in exactly the precise form as he received it from the wholesale grocer. He sold Lyle's golden syrup. Cross-examined by Superintendent Bryne: Witness was not aware that Lyle's firm gave any guarantee under the Food and Drugs Act. The wholesale firms did not recommend him to drop the word "golden." Witness would be much surprised to hear that glucose could be obtained 4s. per cwt. less. Alfred George Wheeler, of Queen-street, Horsham, who has been in the trade for 20 years, said he dealt with Lyle syrup, and considered that glucose was put in to prevent it crystallising. The syrup sold by defendant was known as golden syrup. The word "golden" was used to denote the colour, and not had any reference to the constituent parts; and also to distinguish the syrup from the old black treacle. The Chairman said this being the first case, the Bench would deal with the defendant leniently. They believed, however, that he sold the syrup under the impression that it was golden syrup, but they had the analyst's report before them. It was a clear case, but defendant would only be fined 5s. and costs.

At Petworth Petty Sessions, Thomas Cameron, of Pulborough, was summoned for selling adulterated golden syrup. Defendant pleaded guilty to a technical offence. Kate Pullen, aged 13 years, daughter of Sergeant Pullen, of Pulborough, said that on the date in question she purchased a pound and a half of golden syrup at defendant's shop. Her father paid for the same at the time. Sergeant William Pullen also gave evidence. The Chairman said that he and Mr. Johnstone were members of the Food and Drugs Committee of the County Council, and therefore unless Mr. Cameron wished them to remain, they would retire from the hearing of the case. Defendant desired they should hear the case, which was therefore proceeded with. Defendant said he kept the syrup for one person only, and it was not kept to be sold indiscriminately. By mistake was it so sold on the occasion in question, without his knowledge. Superintendent Read said the syrup had been analysed by the Public Analyst, who reported it adulterated. Defendant was fined 10s., 10s. 6d. costs, and the analyst's fee of 10s. 6d.

WATER AT SPIRIT PRICE.

At Lindsey, Fred Dent, of the Windmill Inn, Ingham, was summoned for selling diluted whisky on the 12th ult., the whisky being 28·6 degrees below proof. Supt. Dain said he bought a pint of whisky, for which he paid 2s. 8d., he was served by Mrs. Dent. The certificate of the analyst showed the whisky to be 3·6 degrees below limit. Fined 10s. and 4s. 6d. costs.

At Wigan, on September 22nd, Alice Johnson, landlady of the Prince of Wales Hotel, Newtown. Pemberton, was fined 20s. and costs for selling adulterated whisky.

ADULTERATED CAMPHORATED OIL.

At Wednesbury on September 12th, Messrs. Raybould, Whitehouse, and Co., wholesale druggists, Wellington Road, Dudley, were summoned for supplying camphorated oil falsely labelled, and for giving a false warranty with the same. Mr. R. A. Willcock prosecuted. Evidence was given that a sample of camphorated oil of the firm's manufacture had been purchased by the county authorities from a shop in Camp-street, Wednesbury, belonging to Benjamin Brynnes. The bottle from which it was taken was labelled "Warranted genuine B.P.," this, it was stated, being understood to mean that it was manufactured according to the formula in the British Pharmacopœia, in which case olive oil should have been used; but an analysis showed the presence of 12 per cent. of mineral oil, and 68·76 of arachis oil, each of these being considerably cheaper than olive oil. The defence was that the oil used was purchased by the defendants as olive oil; and Mr. Raybould stated that he himself mixed the drugs, and that there had been no intentional adulteration. He was quite unable to account for the presence of oil other than olive oil. Mr. Jones, the county analyst, stated that instead of being camphorated oil this was really a common lubricating oil. The Stipendiary imposed a fine of 40s. and costs for each offence—total £8 8s. 6d.

At Brierly Hill, Alexander Morgan, Buttell-lane, was summoned for selling as genuine camphorated oil which was deficient. A sample purchased at defendant's shop upon being analysed was found to be 33 per cent. deficient of the correct amount of camphor, and it was not prepared with olive oil. Mr. Van Tromp, county inspector, said he would not suggest that the defendant knew that the oil was not genuine. The Stipendiary fined defendant 20s. and 20s. costs.

COPPER IN PEAS.

At Stokesly Police Court, Thomas Furness and Co., Ltd., trading as the American and Continental Stores, at Stokesley, was summoned by Thomas Marsden, of Thornaby, Inspector under the Food and Drugs Act, with selling a pound tin of peas adulterated with nearly three-quarters of a grain of copper, and they were fined 2s. 6d. and 9s. 6d. costs.

SUPPRESSING ADULTERATION IN HERTS.

Mr. W. G. RUSHWORTH, the energetic County Council Inspector of Weights and Measures has followed up the attention which he recently paid to the local coal dealers, by directing his notice to the milk vendors, with the result that a batch of them was before the Bench on September 20th, at Berkhamsted.

THE case against the Callow Park Dairy Company, London, was taken first. The Company was charged with selling milk adulterated with 18 per cent. of water. Mr. W. T. Boydell defended. Mr. Rushworth said on the 6th inst. he saw Dowling, a servant of the Company, selling milk at Apsley End, and took a pint from him for 1½d. He told him that he had taken it for analysis. The certificate stated that the milk contained 18 per cent. of added water.

This opinion, the analyst stated, was based on the fact that the milk only contained 7 per cent. of non-fatty solids, whereas it should contain 8·5 per cent. He saw the manager of the Company's branch at Watford, who told him that the milk came from the Creamery at Leighton, where it was collected from the surrounding farmers. By Mr. Boydell: He had not taken previous samples from the present Limited Company, but had taken some from the old Company and found them of poor quality. The manager did not state that he had a written warranty with the milk. He told witness that he took a sample of the milk given to each man each day. He did not state that the Company kept an analyst, but witness knew it was the practice of large Companies to do so. He did not doubt the certificate handed in by the defence which tallied almost exactly with the certificate of the County Analyst, Mr. A. E. Ekins. Mr. Boydell, for the defence, contended that the defendant Company took every precaution possible. They had a warranty with every consignment of milk. They had an analyst on the premises, and every morning when the milk was delivered to the men who distributed the milk, a sample was taken out of each man's churn. On hearing of the complaint the sample taken from Dowling's churn was sent to the analyst together with the sample taken by Mr. Rushworth. The analysis of the sample taken by the foreman showed that the milk was unadulterated, whilst that of Mr. Rushworth was shown as adulterated 18 per cent. of water. He knew that his Company was liable for the men's fault, but they pleaded that the milk was adulterated after it left their premises, and that the Company had done all in their power. Charles Goodhall, the Company's manager, Watford, bore out counsel's statement. In reply to Mr. Rushworth, witness said that Dowling was under notice to leave. He knew that Dowling denied having adulterated the milk. Re-examined: He was present with Dowling on September 5th when several customers complained of the milk, and he alleged that Dowling added water to the milk on September 6th. W. T. Webster, certificated bacteriologist of King's College, London, said he acted as analyst to the Company and was the author of the certificates produced. The Company was fined £1 and £1 9s. 6d. costs, the Bench stating that they considered the Company had taken all the precautions they could to prevent any adulteration.

LLEWELLYN GRIFFITHS, of Boxmoor, was charged on three counts. First, with selling on September 2nd skimmed milk for new; Second, with selling milk adulterated with 12 per cent. of water; Third, with selling milk on the 3rd September adulterated with 16 per cent. of added water. Defendant pleaded not guilty to each count. Mr. Rushworth said he bought a pint of new milk from defendant's man at Frogmore. The analyst's certificate showed that 26 per cent. of fat had been extracted and 12 per cent. of water added. Defendant: My man made a mistake. I sent the milk out as skimmed milk at 1½d. per quart.—Mr. Rushworth: It is not skimmed milk. It contains added water.—Defendant: I can't understand that. On oath (he said) he got the milk from Pix Farm, but the demand had been so great that he had had to purchase milk from other milkmen, and the milk sent out on the 2nd was left from the day before, which he had skimmed twice. The boy had no authority to sell it as new milk, nor to take 2d. a pint for it.—By Mr. Rushworth: The sample produced was not the regular colour of the milk. He put colour in it. The reason was that his customers would not have it unless it was coloured. He did not use water to mix the colour with. Henry Butcher, the lad who served the milk, said he made a mistake in serving the milk as new milk. Mr. Streetfeild-Moore: Do you often make those mistakes?—Witness: Yes sir (Laughter). With regard to the third count, Mr. Rushworth said he met the defendant and telling him how the milk of the previous day had turned out, said he would take a sample of defendant's new milk. He purchased a pint of new milk for 2d., and

the analysis showed that the milk was adulterated with 16 per cent. of added water, whilst the fats were below the normal. Defendant, being sworn again, stated that the milk taken by Mr. Rushworth was not his regular milk but some that he had bought from other dealers. He wished that a sample of his regular milk had been taken. Defendant was fined £4 18s., including costs £2 18s. Defendant: Don't you think that's hard lines, sir, for a poor man? Major Granville: It's harder lines for the poor people that have to drink the milk and pay 3d. a quart for it.

GEORGE PAIN, of Boxmoor, was summoned for selling milk adulterated with 20 per cent. of water, at Cotterell's, on September 2nd. Mr. Rushworth stated that on being told that the milk purchased was to be analysed, defendant's son said, "You know that it is not our best quality. Father carries the best quality." Witness afterwards saw defendant who told him that they could not afford to sell all the milk at 3d. quart, and had to make two qualities. Defendant said he sent his son out with cheap milk. He made cheap milk by taking the first cream off. It was not skimmed milk or it would have the two creams off. He hoped the Bench would take into consideration the fact that he sold milk himself for seventeen years, and it had never been condemned. Superintendent Frogley: You forget 1896. Defendant: No sir: that was sold as cheap milk and this was bought milk, not my own. Fined £2 4s. 6d. including costs.

CHARLES J. ANDREWS was charged with selling milk adulterated with 22 per cent. of water, in Bridge-street, Marlowes, on September 2nd. Mr. Rushworth said defendant's servant refused to take a sample of the milk as he was in a hurry. The analysis showed that the milk contained 22 per cent. of added water. Defendant pleaded that he had been in business for eight years and had never had a complaint before. Fined £2 1s. 6d.

MAGNESIA.

At Wootton Bassett, on September 9th, John Youth, grocer, and Frank Kempster, grocer, were each fined 5s. and 7s. costs for selling carbonate of magnesia as magnesia.

ADULTERATED BUTTER.

At Grantham, Edith Cook, in the employ of Charles English, butter vendor, of 13, London-road, Grantham, was summoned for selling adulterated butter at Grantham on August 11th. Inspector Barnacle said he asked for a pound of tenpenny butter. Defendant served him, and he told her it was for the purpose of analysis. The public analyst certified it to be margarine. Mr. English appeared and said he fully complied with the Margarine Act in the sale of the mixture. He explained that when Mr. Barnacle called, the defendant, who is his niece, was behind the counter. She was inexperienced in the shop, and when Mr. Barnacle asked for tenpenny butter she served him with the mixture which she knew was sold at that price. If he had asked for butter and had not stated the price he would have been supplied with butter. Witness had been in business seventeen years, and he did not think anyone could charge him with a dishonourable act. The Bench imposed a fine of £2, including costs. Mr. English remarked that there was no intention of deceiving the public on his part.

At Wimbledon, on September 20th, Porter Headley, grocer, 81, High-street, Merton, was summoned for selling butter adulterated to the extent of 80 per cent. with foreign fats; and, further, with selling margarine without a label. In reply to the Bench, Inspector Martin stated that the two summonses arose out of one transaction. Edward John Ball stated that on September 1st he purchased half a pound of shilling butter at the defendant's shop. He was served from a slab beside the counter by a

lad, named Herbert Drake, in defendant's employ. The analyst reported that the sample was margarine. Inspector Martin said there was no label on "margarine" in any part of defendant's shop. Defendant pleaded that the lad who served the inspector's assistant was not authorised to serve butter or provisions, and that he had sold it ignorantly, believing it to be butter. The Chairman pointed out that the law required margarine to have a label, adding that the Bench looked upon the case as a bad one. Defendant was in a fair way of business, and the Bench had no doubt but that he had deliberately defrauded poor and ignorant people. They imposed a fine of £5 and 36s. 6d. costs.

At Wednesbury, the Stipendiary (Mr. N. C. A. Neville) fined James Spittle, of Albert-street, Wednesbury, the sum of £20, to include costs, for delivering margarine which was not marked as required by the Act. At Wolverhampton Police-court, Mr. R. A. Willock and Mr. J. G. Thurstield appeared before Mr. Neville on behalf of the defendant, and made an application for the amount of the fine to be reduced. The ground for taking this step was that a statement was made by a witness to the effect that defendant had been previously convicted, an assertion which was incorrect. The Stipendiary came to the conclusion that a mistake had been made, and said he would write to the Home Secretary and recommend that the fine be reduced to £5 and costs, or in default six months' imprisonment.

At Lambeth Police Court, on September 20th, John Davis, of Darwin Street, Newington, S.E., was summoned for exposing margarine for sale without having the same properly labelled. Defendant admitted the offence. Inspector Langstone said the margarine was not labelled at all. The defendant told him he did not know he was breaking the law. Mr. Hopkins ordered the defendant to pay a penalty of 20s. and 12s. 6d. costs.—William Searle, of Aylesbury-street, Newington, was summoned for a similar offence. In answer to the summons the defendant said the weather was so very hot at the time that the label would not remain in the tub. Mr. Hopkins fined him 20s. and 12s. 6d. costs.

ADULTERATED COFFEE.

At Filey, Hilda Allman, shop assistant, was charged with having wilfully sold coffee which was not of the nature, substance, and quality demanded. Superintendent Cooper said he went into the shop of Mr. Wilcox, where defendant was in attendance. He purchased half a pound of coffee, for which he paid 6d. Mrs. Wilcox, who saw the purchase made and overheard the subsequent conversation, said to him, "But we don't sell it as genuine coffee. There is some chicory mixed with it." There was nothing to indicate, however, that the coffee was not genuine. Mr. Wilcox said he gave 10d. per lb. for this class of coffee, and sold it at 1s. The inspector asked for loose coffee, not tinned coffee. They were not asked for loose coffee more than once in a month. He would not sell loose coffee any more. Defendant was fined 8s., including costs.

SEIDLITZ POWDERS.

At Market Harborough, Elizabeth Fox, grocer, was summoned for selling seidlitz powders that were not of standard composition. On defendant's behalf it was explained that the powders were sold exactly as received by her. A fine of £3, including costs, was imposed.

GLUCOSE IN MARMALADE.

THE minutes of the Health Committee, which were submitted at a meeting of the Corporation of Glasgow on August 21st contained the following:—

"The Clerk submitted a letter from Messrs. Thomas

Phillips & Co., Church-street, Coatbridge, explaining that several of their customers in the city had informed them that samples of marmalade had been taken for analysis by the sanitary authorities, and that they had for many years used more or less glucose in all the marmalade they made, and were prepared, with the view of avoiding prosecution, and to meet the requirements of the Sale of Food and Drugs Act, to affix to every pot of their marmalade the words "With Glucose," or some such phrase, and asking, in these circumstances, that no prosecutions be instituted. The Committee having considered the matter with a report thereon by the sanitary inspector, agreed to recommend that the matter be remitted to the Sub-Committee on Food and Milk Supply for consideration and report."

MORE LIGHT ON INCOMPETENT ANALYSIS.

Under this Caption the "Grocer's Journal" has the following on Analyst's and their ways:

"OUR observations last week on the subject of incompetent analysis have speedily been confirmed. At Southwark on Wednesday, a prosecution was instituted against an ice-cream vendor, the allegation being that the cream was injurious to health. Dr. Stevenson was asked if the analysis was his own and admitted that it was not, but that of his bacteriological assistant, and the defence claimed dismissal of the summons on the ground that the Act distinctly states that the analysis must be made by the public analyst. In this contention the defence was upheld, and the summons dismissed. We hope that this decision will be noted by Grocer's Associations and their officials, as this is a precedent for them to watch on behalf of their members. It is, as we previously pointed out, a very serious thing for tradesmen's reputations to be blasted on the certificate of an analyst whose knowledge may be great and his experience extensive, but who has simply signed as correct the conclusions of an assistant. The men analysts employ to aid them in their work may be competent or they may not; but it is not to them the authorities are looking for information as to whether the public is getting wholesome food or not. They rely upon the man whom they have appointed. Sometimes they lean upon a broken reed—too often so; but at any rate, they look to the analyst to speak to his own convictions. Only too frequently of late alarmingly incorrect analyses have been proved to be sworn to in courts of first instance, and the grave differences shown when the articles inspected have gone through the laboratory of the experts have made many people rub their eyes and ask with Bill Nye, "Can such things be?" The secret is coming out—that people who have little chemical knowledge and no responsibility prepare the certificates which are signed by their superiors. The magistrate at Southwark, from his observations, was evidently surprised at the existence of such a state of affairs. He would have accepted the certificate, he said, without suspicions, but for Dr. Stevenson's admission. That is just the mischief. The word of gentlemen paid for this work is always taken, and the grocer suffers, because his word in the matter is worth nothing. He is an interested party—painfully interested when his honesty is being impugned by witnesses who have no personal knowledge of that to which they swear. Should the dictum of Mr. Slade, however, not be overthrown, grocers should suffer such injustice no more. This pernicious system has gone on too long unchecked. The opportunity has now arisen of putting an end to it, and it should at once be taken in hand. We have only too much reason to believe that this deputy-work is universal in large districts where the local authorities are active in the pursuit of knowledge as to the true inwardness of articles of daily dietary. In future, grocers will be justified in challenging the prosecution as to whether the analyst is deposing on his own certificate, or merely endorsing conclusions come to by his subordinates."

CANCER AND CATTLE.

MR. R. JASPER MORE, M.P., has written the following interesting letter to the secretary of the Cancer Society:—"At the request of Sir Charles Cameron, I beg leave to send a suggestion as to the origin of cancer, which Sir Walter Foster and others have thought well worth consideration, and to which I should have drawn attention in the House had there been any discussion on tuberculosis, which would have afforded the opportunity. Having for many years as an amateur devoted what attention I could to the question, I am happy to think your society affords a chance of theories being examined. At the annual meeting of the Royal Agricultural Society, held in the rooms of the Medical Society, in Hanover Square, at the end of last year, a member said there were many cancerous cattle, and much cancerous meat eaten, and that he thought the question of whether cancer in human beings owed its origin to this cause should be examined quite as much as the connection between tuberculosis in cattle and consumption. I followed him and tried to draw further attention to the point, but it seemed to take the president and council by surprise, and no more was said. Since then I have made considerable inquiry into the question amongst farmers of all kinds whom I could trust. I have inquired, first, whether cancer is common amongst cattle, and, secondly, whether the meat is sold for food when it is known the animals suffer from it. The result of my inquiries is that cancer is far more common amongst cattle than tuberculosis, and, secondly, that the meat of those cattle suffering from it is generally sold for food. If this is the case, it seems to me, as an amateur, that as the custom is so prevalent of eating meat underdone, if the meat is not thoroughly cooked cancer may spread in this way. Where cancer is hereditary, might not this be the first cause? The farmers tell me that cancer is generally found near the lips or the throat of the cow. The matter may be kept quiet by them in such cases, in which the animal seems generally to be killed and sold for food, often only half-cooked."

BRITISH MEDICAL JOURNAL ON THE ABOVE.

A CONTEMPORARY has recently published a communication from Mr. Jasper More, M.P., stating that cancer in cattle is far more common than tuberculosis, and suggesting that the consumption of imperfectly-cooked cancerous meat is a possible source of cancer in persons who are otherwise predisposed to the disease. The statement and the suggestion are alike erroneous, and Mr. Jasper More has been misled by relying upon the information of farmers, when he might have gone to more trustworthy sources. Professor McFadyean, the Principal of the Royal Veterinary College in London, has lately had occasion to inquire as to the frequency with which cancer occurs in the lower animals, and he proves conclusively that cancer, although it is not very common, is not at all rare among some species of domesticated animals. Of 49 cases of carcinoma which were removed during the last six years in the clinic of the Royal Veterinary College, 25 were in the horse, 16 in the dog, 5 in the ox, 2 in the cat, and 1 in a sheep; whilst as compared with the incidence of the disease in human beings, the rarity of cancer of the tongue, uterus, and mammary gland is very remarkable. Professor McFadyean states that he has never seen a case of carcinoma of the udder of the cow, and, so far as he is aware, there is no authentic record of such a case. It is clear, therefore, that cancer in cattle is much less common than tuberculosis. The suggestion that cancer can be propagated by eating the flesh of animals who have died with the disease scarcely needs refutation. In the first place, cancer hardly ever affects the muscles, and when it does, it is either by extension, when the disease would be obvious, or by metastatic nodules, which are so distinct that no one would eat them; secondly, animals have been repeatedly fed upon cancerous material without developing any form of new growth,—*British Medical Journal*.

RECENT DAIRYING RESEARCH.

EXPERIMENTS, we learn, have lately been conducted at the Cirencester Agricultural College with the object of producing cheese from boiled milk freed from organisms capable of producing tuberculosis. It seems that the milk was boiled for one minute on the day previous to trying the experiments, and after boiling was quickly cooled in cold water. All the experiments were made with the milk at 84deg. Fahr. Rennet alone, in any quantity, or rennet with the aid of a "starter" in no case produced a workable curd. The addition of lime salts in various sorts was unavailingly tried. Nor did solutions of calcium phosphate in citric acid, in acetic acid, and in carbonated water, nor a solution of superphosphate give satisfactory results, though a better curd was often produced with their use than without. A solution of calcium phosphate in hydrochloric acid gave very fair and promising results; so also did a solution of calcium chloride alone, and a solution of calcium chloride with insufficient sodium phosphate to combine with all the lime present. When the solutions of lime salts added were neutral or nearly so, trials were made of the addition of pure lactic acid, and also of the addition of soured milk as a "starter" before adding the rennet. Curds which in small experiments seemed quite workable and promising for cheese-making were obtained by adding from one 1 to 2 per cent. of a 10 per cent. solution of crystallised calcium chloride to the milk which had been for half-an-hour to three-quarters of an hour with an acid "starter" and then rennetting. Milk, with the addition of 1 per cent. of calcium phosphate dissolved in the least possible quantity of hydro-chloric acid also gave a promising curd.

In connection with milk and butter preservatives, a lecture on milk delivered before the Victorian Branch of the Australian Health Society, by Dr. Louis Henry, of Brunswick, Victoria, has lately attracted considerable attention. Dr. Henry contends that pure fresh milk has, for some hours, certain germicidal properties, due to its protoplasmic milk cells, but that the same milk sterilised by heat has none. The use of antiseptics, he declares, also destroys this property, but while these do not altogether prevent the contamination of the milk they are themselves objectionable, affecting the digestive processes and acting as irritants. He discusses the common preservatives added and especially boracic acid and formalin. The presence of the latter, he points out, may be detected by treating the milk with some quantities of a mixture of sulphuric acid and ferric chloride, which produce a purplish-violet colour even in weak solutions.

MILK SELLING.

In *Farm and Home*, of September 16th, "Trent Valley" writes:—If one were asked what is the greatest change which has taken place in farming customs during the last quarter of a century the reply would, in many of our grass land districts, undoubtedly be the change in dairy management by which the manufacture of cheese and butter has almost become a dead letter, and the sale of milk in its raw state has assumed such enormous dimensions as to be one of the leading features of the country-side. It only seems a few years since a milk churn at a railway station was looked upon almost as a rarity, and dairy farmers looked askance at the suggestion that, at certain seasons, they should send their milk to London or to some large provincial town; yet to-day it is almost an impossibility to pass any fair-sized station at the end of the day without seeing some traces of the great development of the milk trade, and in dairy districts within easy reach of a railway there are but few farmers who do not utilise this outlet for their produce either throughout the year or at times when the demand for milk is good and there is no temptation to turn it to account in other ways. The change in the mode of dealing with the milk is not the only one which has been brought about within the interval mentioned. In the old-fashioned days, when

mixed farming was the rule, the occupier of corn land was always ready at the end of October for the first batch of dry cows to be brought into the strawyard, and here the conversion of straw into manure went continuously on until grass was once more in evidence and cattle could be again transferred to the open fields. Now the strawyard fare and milk production do not go well together; it was therefore essential that the cows should have a somewhat lengthy dry season, and it was arranged that this should fit in at the time when Nature was dormant and when green food was out of the question altogether. From the dairy farmer's standpoint in those days it may be doubted whether an unlimited supply of milk would have been looked upon as an advantage, for cheese-making at mid-winter does not sound a cheerful state of things, and butter-making would not be a very profitable business with a comparatively small yield such as would be forthcoming from a diet composed wholly of hay. A strong argument against winter milk in those days was forthcoming in the fact that the cows which calved at Christmas were almost dry when grass time arrived, and, under such circumstances, the season's make of cheese was bound to be small, although the rent practically depended upon it.

TIMING THE SUPPLY.

The cow-keeper who looks to milk-selling for his returns has to make a complete change in this respect. Instead of doing his best to secure a large bulk of milk in April and May, he must try not only to reduce the output at that season, but to produce his greatest quantity from August to March inclusive. As this can only be brought about by changing the date at which the cows are timed to calve, it follows that in purely milk-selling districts the bulk of the calves are dropped in the last three or four months of the year instead of in the three months from February to April, as in bygone days. Another change is to be found in the mode of feeding the milch cows. Formerly, as stated above, long hay was the sole food of newly-calved cow until she was sent to grass; on a few holdings chaff and meal or roots were employed to eke out the hay, but their number was very few. The high price of cake and corn no doubt acted as a check to their use except for fattening cattle. To-day milch cows are in many cases fed almost as if they were stock intended for the butcher, for their owners are well aware of the fact that it is only by working on these lines that a good yield of milk can be maintained in this variable climate of ours. Still another change consequent upon the sale of new milk is that which has arisen in the number of calves reared upon the old-fashioned dairy farms. As they are brought into the world at a time of year when milk is most in demand and can therefore be least spared for the requirements of the farm, it follows that fewer numbers are retained by their breeders for rearing purposes. This is to be regretted for many reasons; we may, however, hope that the better class of milk substitutes now in the market will presently lead to more home-bred calves being reared. Unless rearing is continued, it is impossible to secure uniformity in a herd or to perpetuate the good qualities of its individual members. In the piggery we witness another change which has been brought about by the sale of the milk as it comes from the cow. Formerly the manufacture of cheese and butter ensured a large bulk of dairy refuse in the shape of whey, skim-milk and butter-milk, all of which were most valuable pig foods. These have now entirely disappeared, with the result that pig-keeping has dwindled to very small proportions, and frequently we find the piggery transformed into a calf-raising shed. Some old-fashioned farmers are inclined to lament the present state of things. They say that the sale of milk has been the means of introducing a new element into the farmer's household, and a new generation of farmer's children is now being brought up who are not likely to become familiar with the inside working of their father's business. I am inclined to think this is far too sweeping an accusation. When we see the large number of competitors at our dairy classes—most of whom are

farmer's daughters—it is a good proof that as much interest is taken in dairy work as of old. There is, it is true, a danger that milk-sellers will presently fall into, of being practically helpless as to dealing upon the spot with large quantities of milk in a period of glut, but upon this point I will touch again presently. Another argument against the regular sale of milk is that it removes everything from the farm. Of course, the "everything" referred to is the source of the pig manure, which once formed so large a part of the manure heap. To the novice there might seem to be a great waste of manurial matter, but in reality this is not the case. A milk producer on a large scale must of necessity feed his cows well at all seasons, and in doing so he cannot possibly avoid using a large quantity of artificial foods, that is, foods not produced upon the farm. It is therefore beyond his power—even if he were so disposed—to produce a large quantity of milk and rob his land of a proper return of manure at the same time.

COMPETITION.

On the other hand, it cannot be denied that milk-sellers are increasing in number year by year, which proves that the system is a paying one, but also proves that unless precautions are taken the milk producers will presently be entering severely into competition with each other, and will be called upon to pay the penalty in accepting lower rates than can possibly yield a remunerative return. The query from a milk-seller a week or two since is a proof that there are seasons of the year when it is next to impossible for a producer to get a good connection in the London or any other milk market. We must not forget that in the spring and early summer milk is produced in very large quantities without any apparent effort on the part of the owner, for the best milk-producing food in the world—pasture grass—is then at its best. The gross output is thus immense, and at that time of year there are two factors at work which the producer cannot deal with, and yet they affect him very materially. In the first place, in the larger towns as soon as spring is really come there is a tendency for holidays to begin, so that a part of the milk-consumers leave home and their places are not filled until their return. The second factor is the bad keeping weather which usually sets in at the beginning of summer. No matter how careful a dealer may be, he cannot help losing a lot of milk, through its becoming soured when thundery weather sets in, and he cannot be blamed if he buys at such times under compulsion, and at his own price. In a few weeks the supply naturally falls off, and the demand increases, so that sellers can almost make their own terms. As pointed out in the reply to the query above referred to, producers should make their plans in advance and be careful to enter into their contracts at that time of year when milk is really being sought after. The milk producer who can turn his milk to account from April to June inclusive, and can then ensure a good supply for the remainder of the year, will always be able to make the best possible bargain with the town dealers, whereas the producer who insists upon the milk being taken regularly must be content to put up with a smaller price and occasionally will meet with scant courtesy at that. It is here that the importance of keeping up an acquaintance with cheese and butter making comes in; for in the months named a good class of goods can be turned out, and with the least amount of trouble.

PRESERVATIVES IN MILK.

Who uses Preservatives in Milk? asks the *Cowkeeper and Dairyman*. Why, who doesn't use it? Yet, when the Committee sitting on the question of preservatives being allowed by the Adulteration Act, and inquiring especially into the general use of preservative, well-known dairymen, when asked whether they use it, declare they never used any in their lives, and got on quite well without it. This is not only untrue in many cases, but a most

absurd and shortsighted policy for dairymen to assert. It would indeed be strange to find a single dairymen who is not a cowkeeper who has not sold preserved milk, especially during such weather as we have lately experienced, if the dairymen himself does not put it in the milk, he is generally pretty certain that the farmer does so, as its sweetness notifies. The committee only want to get to the facts and truth of the case. If the trade as a trade repudiated the use of preservatives, the committee will report that they have inquired of a large number of dairymen, most of whom state they have never used preservative. Therefore the committee will recommend on this evidence that as preservative can be done without by so many successfully, the remainder should do without also. The dairymen will then find themselves in a serious situation, and we shall find those who "never used any preservatives in their lives" hauled up and indiscriminately fined or imprisoned, because Farmer So-and-so said he didn't when he did. It is more than likely that the preservative makers will give evidence before the Committee and let the Committee see the true facts of the case, and should a dairymen be asked the question let him answer fearlessly that it is impossible to carry on his business in a satisfactory manner, or, indeed, carry it on at all unless he is enabled to occasionally preserve his milk from turning sour.

SKIM MILK AS HUMAN FOOD.

SKIM milk contains nearly all of the food value of the original milk, with the exception of the fat, and even this may be present to the extent of 1.10 to 1 per cent. It contains from $3\frac{1}{2}$ to 4 per cent. of protein, about 5 per cent. of milk sugar and 8 per cent. of ash or mineral matter. Its chief value is as a muscle-making food, and hence it is of great value to growing children or labouring people. Its economy as an article of diet can best be shown by comparing it with other foods. Twenty-five cents. will purchase $6\frac{1}{2}$ times as much total nutrients and five times as much protein in skim milk at two cents, a quart as in sirloin steak at 22 cents., or four times as much nutrients and $3\frac{1}{2}$ times as much protein as mutton shoulder at 15 cents. a pound. Or three quarts of skim milk, worth from six cents. to eight cents at retail will hold more total nutrients and more protein than a pound of round steak. At the present prices the only common food materials that will furnish more protein for a given sum of money than skim milk or beans, wheat flour, oatmeal, corn-meal, and salt cod-fish.—Professor C. S. Phelps in *Homestead*. Nevertheless in New York and King's counties of the State of New York, and in all first class cities of the State of New Jersey, laws forbid the sale of skim milk, one of the cheapest of all wholesome foods. Those responsible for this, silliest of all "damphool" laws, are sadly in need of some good brain food, provided they have (which is doubtful) the requisite foundation to build brain upon.—*N.W. Milk Report*.

BRITISH DAIRY FARMERS AND MILK EXTRACT.

THE British Dairy Farmers' Association have discussed some correspondence between the Kent Agriculturists and the Board of Agriculture on the subject of the offer to one of their members of a so-called "milk extract." It appeared that a sample forwarded to the Board of Agriculture had been analysed at the Government Laboratory, with the following results:—

Non-fatty milk solids ...	35.75 per cent.
Milk fat ...	7.90 "
Water ...	56.25 "
Ash ...	3.19 "

"The sample has been condensed to about one-fourth of the weight of the original milk, which could not have contained more than two-thirds of the proportion of fat found in milk of fair quality. The sample has been

naturally sterilised in the process of condensation, and contains sufficient boric acid to keep the milk extract sweet for a few days after dilution with water." In communicating these results to the Canterbury Farmers' Club, on July 27th, it was stated by the Board of Agriculture that "on information thus far placed before them there appear to be no legal steps which they could properly take." The council, having discussed the correspondence, directed the secretary to communicate their opinion that the so-called milk extract was, as found by the Government analyst, simply condensed milk, and that those who employed it must run the risks naturally attending such practice.

THE PUBLIC HEALTH CONGRESS AND TUBERCULOSIS.

ONE of the most interesting papers contributed to the Congress during its session in Blackpool was that on Tuberculosis, read by Mr. James Laithwood, Chief Veterinary Inspector for the County of Cheshire. With admirable courage, says the *Meat Trades Journal*, he boldly declared that the conduct of the Government in declining to grapple with the question was absolutely criminal. The intelligent public in Mr. Laithwood's opinion seemed now prepared for some definite methods of prevention. We are glad to have this authoritative confirmation of our views, and to know that our repeated demand for tuberculosis to be scheduled as a contagious disease has such powerful support. The utter folly of our legislators—Imperial and Municipal—in supposing that tuberculosis can be stamped out by seizing and condemning dead meat, while no effort is directed towards eradicating the disease, never was more plainly shown or more publicly denounced. We are not in a position to accept Mr. Laithwood's statement that only £164,000 would require to be paid during the first two years if compensation for tuberculous animals slaughtered under the Contagious Diseases (Animals) Act was given. We assume, however, that the calculations are correct, and therefore ask what is such a sum in comparison with the alleged annual mortality from tubercular diseases? The Board of Agriculture has already disbursed over half a million of money as compensation for the compulsory slaughter of pigs said to be affected with swine fever, and yet the disease is apparently as far from being "stamped out" as it was years ago. Mr. Laithwood suggests that immediate notification of the disease should be made compulsory, and though we endorse the suggestion heartily as a step in the right direction, we maintain that every sick animal, no matter what the nature of its trouble, should be under official control, and, unless accompanied by a veterinary certificate to the effect that its flesh was fit for human food, the offering of same for sale, either privately or publicly, should be a penal offence. As we have said over and over again, it is a cruel injustice to allow the owner of a tuberculous animal to sell it and pocket the money, while the butcher who buys it in good faith becomes a criminal for being in possession of it. The education of public opinion is a terribly slow process, but once the elementary part is mastered, progress thereafter becomes very rapid, the ballot box at municipal and general elections affording significant occasions for displaying the knowledge acquired. In November next it is to be hoped our traders will take advantage of the special opportunities then available for showing how public opinion—so far as this tuberculosis bogey is concerned—is on the side of justice, truth, and common-sense. By the time the general election is on we shall probably hear from some of the masters at St. Stephen's that they are in almost complete accord with the views of their pupils (voters). Meanwhile, it is something to be grateful for that the lessons we have been endeavouring to inculcate have been seriously and intelligently taken up by the Public Health Congress.

MUST COUNTY ANALYSTS ANALYSE WORKHOUSE DRUGS FREE.

SIR CHARLES CAMERON wrote as follows to the Navan Board of Guardians: "It is not my intention to make analyses of drugs as required by the Local Government Board without remuneration. The clear intention of the Local Government Board is that the guardians should appoint and pay chemists to analyse the drugs supplied to the Union. This is fully explained in the enclosed paper. Drogheda Union has appointed an analyst, and Trim Union has advertised for one. I think I have already mentioned the terms on which I would analyse the drugs for your Union." The Clerk remarked that the County Council had notified the several unions in Meath that Sir Charles Cameron was bound to analyse the Union drugs.

The matter is to be further considered.

CLERKENWELL VESTRY AND FOOD ADULTERATION.

At the last meeting of the Clerkenwell Vestry Mr. Walton drew attention to the public analyst's report which showed that out of 77 samples taken by the inspectors under the Food and Drugs Act, 11 were found to be adulterated. He thought this bad; and thought also that more samples should be taken. Seventy-seven samples in a quarter, and three inspectors to take them was not a sufficient number.

Mr. Colwell (analyst)—It is not for the analyst to say what is a sufficient number. The inspectors have acted upon the resolution of the Vestry, which ordered that 300 samples be taken in a year. We have done that.

Mr. Millward—I think the report is satisfactory to have only 11 cases of adulteration out of a total of 77, seeing the competition there is in trade. The Vestry go to the small hucksters' shops for their samples of milk, instead of meeting the milk churns at the railway stations.

Mr. Walton—I don't think 77 in three months sufficient; and shall move a reference to the Public Health Committee to re-consider this matter.

Mr. Daldorph seconded, and it was adopted.

HOW CHARTREUSE CAME ABOUT.

THE liqueur Chartreuse affords a curious instance of name evolution. Of course, everybody knows that it was originally a corruption of the Latin *Carthusii*, an order of the monastics founded in the eleventh century, and taking its name from a little village near which the first monastery was founded, *Carthusia*, or in French *Chartreuse*. These monks were bound by their vows to eat no animal food, or rather no meat, or any preparations into which meat entered, and as they grew wealthy they lusted after the flesh pots; the simple diet of bread and vegetables palled on their taste.

Finally one of them invented a cake, the basis of which was a paste said to have been similar to or identical with the macaroni of to-day. The basis, however, cuts little figure in the marvellous cake into which it finally developed. The neighbourhood of *Carthusia*, or *Chartreuse*, was noted then, as now, for the great variety of spicy herbs that grew there, and the peculiar richness developed by them. Gradually one after another of these herbs were introduced into the cake, along with wines of constantly increasing alcoholic strength, until finally brandy was used. In the meantime, various fruits were added to the body of the cake, until it finally became a mere crust or pastry, filled with fruits, spicy herbs, sugar and brandy—a mince pie, in fact, without the meat. As the years and centuries rolled on, the process of evolution advanced. Having got to the point stated, one by one the solids began to disappear from the dish, being represented thereon merely by their essences, cunningly distilled, or otherwise obtained (by maceration, or by exhaustion in some form). Angelica and brandy increased in proportion, until finally the last solid was eliminated and *Chartreuse*, as we know it, the most magnificent of all liqueurs, stood forth.

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SATURDAY, OCTOBER 7, 1899.

OBJECT LESSONS IN MILK ADULTERATION.

Serious Analytical Variations.

Strong Remarks from the Magistrates.

At Brixham, before Messrs. L. Llewellyn (in the chair), N. Baker, and Major Harlowe Turner, the adjourned case against Samuel Thomas, dairyman, who was summoned at the last court for selling adulterated milk, came up for hearing. According to the evidence of Superintendent Roberts, the analytical report of Dr. Wynter Blyth showed that the sample of milk submitted to him contained 11·6 of added water, whilst a certificate from Mr. Quant, analyst, of Torquay, which was put in by the defendant, certified the milk to be pure. On the

application of the defendant, the remaining sample had been forwarded to Somerset House for analysis. The Clerk of the court now produced the certificate from Somerset House, which stated that “the sample submitted contained non-fatty solids, 8·92 fat 3·19; and from the consideration of results we are of opinion that the sample in question affords no evidence of the presence of added water.” The Bench thereupon dismissed the case with £1 2s. costs against the prosecutor, and directed the clerk of the justices to communicate with the County Council, calling their attention to the mode in which analyses were conducted by different analysts, and further suggesting that the costs paid by the prosecutor be refunded to him by the county, otherwise the Act would remain a dead letter.

At Norwich Guildhall, on September 26th, James Aldridge, shopkeeper, of Shadwell Street, was summoned for selling milk which had been adulterated with 9½ per cent. of added water on September 9th. The Town Clerk appeared in support of the information, and in defence Aldridge said he sold the milk as it was delivered to him. He bought it as new milk, and sold it as such. The magistrates inflicted a fine of 10s. and 8s. costs.

WILLIAM DAWSON, shopkeeper, of Shadwell Street, was summoned for selling milk which had been adulterated with 23½ per cent. of added water on September 7th. The purchase of the milk having been proved, defendant contended that he had never added a drop of water to the milk. It would never occur again, as he should sell no more milk. He was fined £1 and 8s. costs or seven days. Defendant said he would be hung before he would pay anything. The magistrates might hang him out of the window at once.

At Portsmouth Police Court, on September 26th, before Mr. T. Cousins and Commander W. L. Bamber, the adjourned summons against George Loder, residing at Higher Farm, Preston, Yeovil, Somersetshire, for selling milk to which 3·7 per cent. of water had been added, was heard. Mr. G. H. King prosecuted, and Mr. Blagg appeared for the defence. The case had been adjourned in order that a third sample of the milk might be submitted to the Government analyst. The report of the analyst was to the effect that, after making every allowance for the change in the condition of the milk owing to the time it had been kept, he was of opinion that no less than 5 per cent. of water had been added. The Chairman said that this fully bore out the report of the Borough Analyst (Mr. Murray) and as the defendant was in a big way of business it was a serious case. The defendant would be fined £5, £1 7s. costs, 11s. costs of the Borough Analyst, and £3 3s. solicitor's fees. A week was allowed for payment.

At Eastbourne on September 29th, Herbert Haddon Frowd, of Perry's Dairy, Susan's Road, and of 28, Seaside, was summoned in respect of the sale of milk adulterated with 12·9 per cent. of added water. Mr. H. W. Fovargue, the Town Clerk, prosecuted, the defendant being represented by Mr. Ricketts, of London. John Henry Ollett, Sanitary Inspector, stated that, acting on information which he had received, he was in Langney Road at 6.15 a.m. on September 1st, when he saw a milk cart belonging to the Perry Dairy standing outside The Holidays, of which a man in the employ of the defendant, named Benjamin Jones, was in charge. The man was in The Holidays, when witness first came up, and when Jones came out witness asked to be served with a pint and a half of milk. Jones proceeded to a small hand can, containing about three pints, out of which to serve witness, wherefore he (witness) asked to be served out of the churns or the other hand cans. The man then said that they contained skim milk, but he could produce no list of

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his skim milk customers, and eventually witness said he would take a pint and a half of the milk, whatever it was, and for this he paid twopence, which was neither the price of new or skim milk. The milk was divided and prepared for analysis in the usual way, and the analysis produced showed that it contained 12.9 per cent. of added water, and that it was new milk with water added, and not milk from which the fat had been abstracted. He saw the defendant before the man Jones returned from his round, and Mr. Frowd then told him that he sent out no skim milk unless it was expressly ordered. When Jones returned, and was challenged by Mr. Frowd, the man said he made the statement as to the milk being skim milk in his employer's interest, owing to the probable effect of the long drought upon the quality of the article. Cross-examined, Mr. Ollett said he had acted upon information that this man had been in the habit of watering this milk in the stable premises, and Mr. Frowd told him that he had himself been watching the man for three days. Before the summons could be served, the man Jones had left Eastbourne, or was unable to be found. The case submitted on behalf of the defendant, was that the act complained of was the act of an employé, and Mr. Ricketts urged that the defendant, who had never previously been concerned in such a charge, though he had had many samples of his milk taken, should not be made responsible. Mary Ann Franklin, wife of David Franklin, of Golden Hop Cottages, Seaside, a cabdriver, was then called for the defence, and stated that she had seen the man Jones several times taking water away from a tap in her husband's stable yard, in a can which would hold about ten quarts; and, as no cans were washed in the yard and the man had no need to do this, she complained to Mr. Frowd. Mr. Ricketts proposed to call the defendant, who, he said, would tell the Magistrates that, acting on this information, he had been on the watch, but the Chairman said they did not think this necessary. The onus of seeing that a genuine article was supplied to his customers must rest with the employer, and the Magistrates would be the last to take away any of the safeguards for the protection of the public in that respect. In this case, however, being satisfied that the employer had no guilty knowledge, and, although on another occasion, if he had any doubt, they would advise him to test the milk on the route, they thought that justice would be met by the withdrawing of the prosecution on payment by defendant of the costs, which amounted to £1 0s. 6d. If that were done no conviction would be recorded against the defendant, who, up to the present, had an unblemished character. Mr. Fovargue expressed his readiness to fall in with this suggestion, and the summons was accordingly withdrawn.

WILLIAM CLACEE, of the Railway Hotel, Wanstrow, Somersetshire, appeared at the Marylebone Police Court, on September 29th, to two summonses, issued at the instance of the Paddington Vestry, for sending milk to London which, on analysis, was found to contain 8 per

cent. of added water. Mr. Dennis prosecuted for the Vestry. The defendant pleaded guilty to the summonses, though he denied that he added any water to the milk. A previous conviction against the defendant of 20s., with 23s. costs, in November last having been proved, the Magistrate fined him 60s., with 12s. 6d. costs, on the first summons, and £5, with 12s. 6d. costs, on the second, £9 5s. in all.—William Loxton, of Cloford House Farm, Cloford, Frome, answered to four summonses for similar offences, the percentages of adulteration being 15, 11, 11, and 8 respectively. He also denied adding water to the milk, but was unable to dispute the analyst's certificates, and was fined 20s., with 12s. 6d. costs, on the first summons; 40s., with 12s. 6d., on the second; 60s., with 12s. 6d., on the third; and 80s., with 12s. 6d., on the fourth—£12 10s. in all.

AT Portsmouth, William Henry Milton, of 29, Cuthbert Road, Kingston, milk purveyor, was summoned by Chief Sanitary Inspector Bell for refusing to serve Inspector Lovelock with a pennyworth of milk on July 3rd. Inspector Lovelock stated that he was on duty in Clifton Street, Fratton, on the date mentioned, and asked defendant for a pennyworth of milk out of a certain bucket. Defendant, however, offered him milk from another can, saying that he had a warranty with that, but he had not for the milk witness wanted. The inspector declined to take the milk from the churn, and defendant persisted in refusing to serve him from the bucket. Defendant told witness that he was serving milk from the bucket to the public. Albert Aylmer, employed in the Health Department, and living at 36, Nelson Road, Landport, said that he was with the Inspector when the latter demanded the milk from defendant, who was at the time serving milk to customers from the bucket. Mr. E. Hobbs, for the defendant, said the weather was exceedingly hot at the time, and defendant usually received a written warranty both with his afternoon and morning milk, but on this occasion he was short and had to buy a gallon and a half from one of the vendors at the station. Defendant was fined £4 10s. 6d., and 9s. 6d. costs, and was allowed three days in which to pay. In default of distress, one month's imprisonment.

AT Newport, on October 2nd, two milk vendors appeared to answer summonses for selling milk from which the fat had been abstracted. Thomas Lewis, of 27, Canal Parade, was first dealt with. Inspector Spencer Jones purchased a pint of milk from the defendant, and sent a portion to the borough analyst, who reported that 21 per cent. of fat had been abstracted from the milk, and that the sample contained 7 per cent. of added water. Lewis, as the Town Clerk, who prosecuted, put it, made the time-honoured excuse that he had purchased the milk from a Newport dairyman, and had sold it in the same condition as he had received it. Inspector Jones told the court that Lewis served the poorer class of people. Lewis, who had been fined on a previous occasion for a similar offence, was now fined £5 or one month's imprisonment.—John Roderick, 31, Lewis Street, whose sample of milk, when analysed was found to have had 18 per cent. of original fat abstracted from it, stated that he had sold milk in Newport for 40 years, and samples had been taken on former occasions, but he had never been prosecuted before. He sold the milk, which he received by rail, in the same condition as that in which he had received it, and handed in the labels, which said that the cans contained "pure milk." The Town Clerk said that Roderick was a respectable milk vendor, and he did not press for a heavy penalty. Defendant was fined 20s.

AT Leamington, on October 2nd, at the Borough Police Court, Charles Townsend, Clarendon Avenue, was summoned for selling adulterated milk on August 24th. The Public Analyst's certificate showed that the milk was adulterated with 20 per cent. of water. Mr. Overell said defendant had ceased to be a milk-seller for some years, except in very small quantities, and he sold

the milk as he received it. The Bench imposed a fine of £1 15s., and costs £1 2s. 7d. Defendant said that the amount of the fine and costs came to more than the value of the milk he had sold since he was in business.

FALSE TRADE DESCRIPTIONS OF SEIDLITZ POWDER AND CAMPHORATED OIL.

At New Swindon, on September 25th, Bell, Son & Co., wholesale druggists, Liverpool, were summoned for applying a false trade description to seidlitz powders supplied to Mr. James Lord, grocer, Wotton Bassett, and also to camphorated oil supplied in 1896 to Mr. Joseph Maylott, grocer, Oriol Street, New Swindon. In the first case, Dr. Dyer, the analyst, stated that the alkaline portion of the powders was correct, but there was 20 per cent. of alum in the tartaric acid portion, which should have consisted of pure tartaric acid. The addition would be injurious, as it would lead to indigestion, and the object of the addition was cheapness. The defence was that the defendants sold the tartaric acid exactly as it was supplied to them.

In the other case the camphorated oil consisted of 14 per cent. of camphor, 4 per cent. of mineral oil, and 82 per cent. of fatty oil. He added, in cross-examination, that up to 1898, there was no mention of camphorated oil in the "British Pharmacopœia;" it was called liniment camphor, and the term camphorated oil was added in 1898, he believed, to deal with cases like this. For the defence it was urged that when the oil was sold there was no prescription for camphorated oil in the "British Pharmacopœia." It was also urged that there had been an evaporation of camphor, but not sufficient to injure one. The Bench convicted, and imposed a fine of £10 in the first case, and £1 in the second, the costs to be taxed. Mr. Maylott was also summoned for retailing adulterated camphorated oil. The Bench thought he had been more sinned against than sinning, and he was fined 1s., the costs being remitted.

SWEET SPIRITS OF NITRE.

At the Rotherham West Riding Police Court, on September 25th, before Mr. H. W. Verelst (in the chair), Mr. E. W. Hodgkinson and Mr. A. E. Beacher, a shop-keeper named James Snowden, of Dinnington, was summoned for having sold sweet spirits of nitre, not of the nature, substance and quality demanded. On August 15th, Mr. Joseph Wilson, an inspector under the Food and Drugs Act for the West Riding County Council, purchased four ounces of sweet spirits of nitre, for which he paid 1s. The nitre was divided into three parts in accordance with the Act, and one of them was left with the defendant. A second part was forwarded to Mr. A. H. Allen, analyst, who certified that the mixture was composed as follows:—Nitrous ether 0·87, alcohol and legitimate water 97·84, excess of water 1·29. Defendant said the nitre was sold just as received on July 15th. He called Mr. Robert Bennett, chemist, of Corn Exchange, Sheffield, who said he supplied the spirits of nitre. The firm from whom he purchased it had written stating that when it left them it was of full strength. He supplied Mr. Snowden, and could vouch that there had been no adulteration. He accounted for the excess of water through evaporation. Pouring the spirit into the inspector's bottle, which might possibly be damp at the time, would be sufficient to cause the percentage. The Bench imposed a fine of 5s. and costs.

MARGARINE AS BUTTER.

At Liverpool, on September 27th, Richard James was fined 40s. and costs, for having exposed in his shop, 73, Alt Street, a piece of unlabelled margarine. Alice Gibson, 46, Dove Street, for a like offence, was mulcted in the same amount of penalty. Inspector Baker, of the Corporation Health Department, proved the charges, and Mr. Cripps supported the informations.

At Bristol, on October 2nd, Albert William Hart was charged that he, on the 29th of August, sold a quantity of margarine as butter, and also neglected to mark a quantity of margarine in letters not less than $\frac{1}{4}$ -inch square, as required by the Food and Drugs Act. Mr. H. R. Wansbrough prosecuted, and Mr. Press defended. The case for the prosecution was that on the 29th of August, an assistant of Mr. Simpson, the Food and Drugs Inspector, went to a shop owned by defendant at the top of Christmas Steps, under the management of a Mr. Walters, and bought $\frac{1}{2}$ lb. of 1s. butter, which, on being examined, was found to be 100 per cent. margarine. Evidence corroborative of this was then taken, after which Mr. Press addressed the court. He said the defendant had two shops, one at Berkeley Place, which he managed himself, and another at Christmas Steps, which up to a recent date was managed by William Walters. While admitting that margarine had in this instance been sold, he maintained that Walters had made a mistake, though without intent to defraud. The supplies for Walter's shop were sent from Berkeley Place. Mr. Hart, the defendant, was sworn, and described the manner in which the stores were sent down, and William Walters stated that when Mr. Simpson's assistants visited the shop and asked for $\frac{1}{2}$ lb. of butter, he said he had none upstairs, but would run down and get some. He went downstairs and cut off some of their "special roll," which was sent to him by the defendant to be sold as butter. By Mr. Wansbrough: He had no 1s. butter on the premises. He had generally got that kind of article from the defendant when he ordered butter. The words "special roll" he did not know the meaning of, but he sold it as butter. He, however, "guessed it to be a mixture." In reply to defendant's solicitor, Walters said that when he first was employed by Hart, the latter said, "I have some special roll." Witness said, "What is it?" and he replied "You can guess." Mr. Wansbrough said defendant had been previously summoned for selling adulterated lard, and the magistrates convicted him on the first charge and fined him £5, solicitors' fees being allowed.

EXCESS WATER IN BUTTER.

At the Rochdale County Police Court, on September 27th, before Mr. A. Law (in the chair), and other magistrates, Amos Bamford, grocer, 469, Market Street, Whitworth, was summoned for selling 1 lb. of butter, adulterated with 24·63 per cent. of water. Mr. Beckton (Messrs. Hockin, Raby and Beckton, solicitors, Manchester) said the complaint was laid by Wm. James Parkinson, an inspector of food for the Royal Lancashire Agricultural Society, which, for the purposes of this prosecution, was amalgamated with the Lancashire County Council. On August 22nd, the inspector bought 1 lb. of butter at defendant's shop, which on analysis was found to contain 24·63 per cent. of water—an extraordinary percentage—only 69·02 of butter fat, and 6·35 of extraneous matter. That was a very bad sample indeed. During the last few days defendant had given notice that he relied for the defence on a warranty which he got with the butter. If he proved to the satisfaction of the Bench that the butter was warranted pure to him there was an end of the case as far as this prosecution was concerned. Inspector Parkinson proved the purchase of the butter, and produced the analyst's certificate. He added that during his experience as an inspector he had never before found butter containing so much water. Answering the Chairman, he said the maximum percentage of water allowed was 15 per cent., and that was a liberal allowance. As a shipper, he knew the average proportions were 12 to 15 per cent. in Irish butter, 8 to 10 in Canadian, and about 12 per cent. in New York. Butter fat usually ranged from 80 to 91 per cent., as compared with 69·02 in this instance. Defendant was sworn, and said that the butter was warranted pure by Messrs. Van Stroughton and Zoon, of Manchester, from whom he bought it. He was quite sure that this was the particular butter with which he received

the warranty produced, and he sold it in the same condition as he received it. The Chairman said the case would be dismissed. Mr. Beckton: He is protected under the Act; you have no alternative.

ADULTERATED MILK OF SULPHUR.

At Barnsley, on September 29th, Joseph Clarkson, manager of the Clayton West Branch of the Cissett Co-operative Society was fined 5s. and costs for selling adulterated milk of sulphur. Mr. A. H. Allen, public analyst, certified that the mixture sold by the defendant contained: Sulphur 44 per cent., hydrated calcium sulphate 56 per cent. These were the constituents which formed the preparation described as milk of sulphur in the British Pharmacopœia, at the beginning of the century, but such preparations had been purposely excluded from the Pharmacopœia, since 1884.

WATER AT SPIRIT PRICE.

At Llanfyllin Petty Sessions, William Williams, of the Oak Inn, was charged with adulterating Irish whisky to the extent of sixteen degrees, John Ellis, of the New Inn, to the extent of eight degrees, and George Swain, of the Wynnstay Hotel, to the extent of four degrees. Ellis stated that when he put the whisky into the cellar it was all right, but the increased temperature deteriorated its strength. The Bench retired to consider their decision, and, on their return, the Mayor said defendants would be fined 1s. for each degree to the bad: Williams, 16s. and costs £1 9s., Ellis, 8s. and costs £1 9s., and Swan 4s. and costs £1 9s. P.S. Meredith prosecuted.

At Keynsham Petty Sessions, Eliza Jane Stanhope, of the Lamb and Lark, Keynsham, was summoned for selling whisky 43 degrees under proof. Mr. Pomeroy appeared for the defendant, who pleaded not guilty. P.S. Pratt said that on August 25th he went to the Lamb and Lark, and asked the barmaid for a pint of whiskey, handing her a bottle at the time. He asked the price, and she said 2s. 4d., which he paid. He then told her it was for analysis, and he divided it into three parts and sealed the bottles. In reply to Mr. Pomeroy: He believed the whisky was taken from a bottle. Supt. Brown, of Temple Cloud, spoke to receiving the bottles and to submitting them to the public analyst at Taunton. He produced the certificate, which stated that the whisky was 43 degrees under proof. In reply to Mr. Pomeroy: He had received no complaint of the way Mrs. Stanhope had conducted the house since she had been the licensee, something about a year. P.C. Flagg said that when he went to serve the summons, Mrs. Stanhope said that in consequence of her being away the day before, there had been no whisky blended. Her stepdaughter had blended some, and had put a pint of water into a quart bottle and filled it up with whisky instead of putting only half a pint of water, not knowing any different. Mr. Pomeroy submitted that no fraud had been committed, remarking that it was the first time the stepdaughter had blended any whisky. Mrs. Stanhope and her daughter gave evidence in support of this statement. The Bench said the case appeared to have been an accident, and the defendant would be fined 1s. and costs.

At Darlington Petty Sessions, John Snowdon and Mary E. Robson, publicans, were each fined 20s. and costs for selling whisky adulterated below the standard allowed by law.

At Shire Hall, Nottingham, on September 30th, William Caleb Brown, licensed victualler, of Wysall, was summoned at the instance of Colonel Story (Inspector of Weights and Measures to the Notts County Council) for selling whisky adulterated with 93 parts of added water. Witness was represented by his wife, who said that the whisky in question was part of the stock which they took over on entering the house two months ago, and they were given to understand that it was genuine. Under the

circumstances the Bench took a lenient view of the case, and imposed a fine of one guinea. Another licensed victualler named Joseph Shelton, carrying on business at Awsworth, was ordered to pay five guineas for a similar offence, he having been previously convicted. In this case there were 15 parts of added water. Mr. E. Williams appeared for the defendant, and contended that the sample taken by the inspector was not whisky and water, but a mixture of whisky and brandy—a special decoction of the landlord's.

MAGNESIA.

At Pontefract, Walter Edward Milburn, Castleford, was charged with having sold adulterated magnesia. Inspector Wilson said he asked for 4 ounces of heavy magnesia. The public analyst certified that 42 per cent. was magnesia and 58 per cent. was carbolic acid and water. Defendant pleaded guilty, and said that it was a mistake which had led to the inspector being supplied with heavy carbonate instead of heavy magnesia. It was often supplied as magnesia, though as heavy carbonate it was perfectly pure. The Bench said they would accept the explanation, but defendant would have to pay the costs, £1 11s.

BACON UNDER THE SCALES.

At Birmingham, Charles Robert Hunter, grocer, 228, Ladypool Road, Sparkbrook, was summoned for having unjust scales in his possession, on the 8th inst., there being a draught of half an ounce against the purchaser. Inspector Wheeler said he found the scales produced behind the counter. On raising the plate he noticed a piece of bacon adhering to it. Defendant tried to snatch the plate away, but witness retained it, and on looking at it again, found another piece of bacon sticking to the plate. The pieces together weighed half an ounce. Defendant, added witness, had only been in the shop for five weeks. Hunter pleaded that he had no knowledge of the matter; but the Bench, holding that this was disproved by the way in which he acted when the inspector entered the shop, fined him 40s. and costs.

ADULTERATED CAMPHORATED OIL.

At Darlington County Petty Sessions, Jane Nicholson, Cockerton, was charged with a contravention of the Food and Drugs Act in connection with the sale of camphorated oil. Mr. Simey, jun., prosecuted, and Mr. F. B. Laidler, defended. Mr. Moorhouse Thompson, an Inspector for Durham County, proved the sale of the camphorated oil, a bottle taken from a card on which were other bottles, and Mr. W. F. Keating Stock, County Analyst, deposed that the sample forwarded to him was made up as follows: oil, 90.3; camphor, 9.7; a deficiency of 5.4 per cent. The defence was that defendant had purchased the oil with a written warranty, worded "Finest quality camphorated oil, B.P.," and it was the wholesale maker, who should have been prosecuted. If defendant were fined he could recover the amount from the seller to him, who, however, could not recover from the Doncaster firm from whom he purchased in large quantities, and who were the persons to be punished. Mr. Trowsdale, of the firm of Trowsdale, Shipley and Co., Leadenhall Street, deposed to the sale of the oil to defendants, and to his purchase of it from Geo. Wilton and Co., Ltd., Doncaster. The oil was re-sold just as received. Fined £1 including costs.

JOHN HY. PROUD was charged with a similar offence, Mr. Meek (Messrs. Lucas, Hutchinson and Meek) defending, Mr. Simey conducting the prosecution. Mr. Stock proved that the oil submitted to him was rape oil, and deficient in camphor 60 per cent. This was admitted, and Mr. Meek pleaded that he represented the defendant and Messrs. Holmes and Richmond, Darlington, the makers of the oil. When that firm ascertained that they were not making the oil according to the British Pharmacopœia

they requested their customers to return all oil sold last year. This, it appears, was not returned, and they regretted that fact, and had done the next best thing and taken the responsibility. A fine of 20s. inclusive was imposed.

THE MUNICIPALISATION OF THE MILK SUPPLY.

"THE Fabian Municipal Programme (Second Series), No. 1, states much attention has lately been given to the improvement of the milk supply, but the importance of the subject and the evils which exist under the present conditions are not yet sufficiently realised by the public. Dr. Ernest Hart, the late editor of the *British Medical Journal*, who carefully studied milk in relation to the spread of disease, says, 'the story is sufficiently sad and deplorable. It is one that reflects little credit on our boasted sanitary advancement. We must not forget . . . that to children and invalids it is a matter of great moment that our milk service shall be free from any quality likely to prove injurious. . . . The fact remains that, treat it as we will, there is death in the milk pail.'

"It is now time to consider whether it is safe to allow the milk supply to remain as a source of profit in the hands of private individuals. Milk is by far the most important article of food for children, and it is essential that it should be pure. The physique of adults largely depends on the food consumed in early life, and, owing to the growth of the practice of artificial feeding, cows' milk is, unfortunately, every year more largely used as a food for young infants.

"Tuberculosis killed 60,000 persons last year in England and Wales. It is safe to predict that the organised attempt now being made to stamp out the disease will fail while the present conditions of the milk supply remain unchanged.

"Condensed separated milk (the word 'separated' being printed in very small letters on the label) is coming extensively into use for the children of the poor. It is destitute of fats, and its use, as a substitute for genuine milk, has given rise to a large mortality from wasting diseases. Professor Corfield has traced an outbreak of scarlet fever to a tin of condensed milk.

"How can the milk supply be improved? Some Public Health Officials believe it can be done by a vigilant inspection and supervision of the milk trade by the local authorities. The Dairies, Cowsheds, and Milk Shops' Order of 1885, throws upon every sanitary authority the duty of supervising the milk trade in its district. It makes some provision for the proper keeping of cowsheds, dairies, and milk shops, provides against keeping swine in a cowshed, and prohibits any person suffering from infectious disease or having recently been in contact with a person so suffering, from taking part in the production, distribution, or storage of milk. These provisions, if generally enforced, would no doubt improve our milk supply to a certain extent. Many Urban Authorities have enforced them with some success. But by far the greater portion of our milk comes from the country, where the Rural District Councils hold sway. These bodies have done practically nothing to enforce the law with regard to milk. This is not to be wondered at, as they are largely composed of farmers who may be relied upon not to improve restrictions in their own trade. Realising the hopelessness of looking for reform in this direction, eight municipalities, including Manchester and Leeds, have this session introduced Bills into Parliament to give them the power of inspecting any dairy or cowshed wherever situated from which milk is being supplied within their jurisdiction, and of removing therefrom any cow suffering from tuberculosis of the udder. These Bills gave rise to a storm of opposition from the farmers in the surrounding districts, and have been considerably modified. It is quite certain

that no measures of inspection will be found adequate to combat the existing evils.

"The remedy is to municipalise the milk supply. If Manchester and Leeds want good milk, let them establish their own dairy farms in the country and their milk stores in the city. Many of our large towns have spent enormous sums of money to provide their citizens with water; why should they not also provide them with milk? The arguments in favour of municipal water apply with greater force to municipal milk. We want municipal dairy farms in the country, managed by dairy experts, and supervised by medical officers and veterinary inspectors. We want carefully selected, healthy cows to give us milk, and we want them kept under proper conditions. On our municipal dairy farms we could see that these conditions were fulfilled. A municipality would have no interest in adding dirty water to milk to make two gallons look like three. Milk municipalisation would be a comparatively simple business. No powerful companies would have to be bought, and no question of compensation for loss of licence could arise. Milk production does not require the use of complicated and costly machinery. The milk trade pays well, and its concentration would give rise to an increased economy in working. We should get cheaper as well as better milk. On the municipal farms we could insist that the labourers were paid a fair rate of wages. Much could be done in this way to improve the condition of the agricultural labourers, and thus to check the rush to the towns. Several municipalities are already engaged in the milk trade. Nottingham, for instance, keeps 100 milch cows and supplies milk to its own hospitals. The right way is to begin with public institutions. But we shall have to go much further when the public realises the extent to which cruelty, dishonesty, disease and death are involved in the present method of the milk supply."

DISINFECTANTS AND THEIR USES.

By WALTER BRYAN, M.A., M.D.

THE request, "I want a disinfectant," is one frequently made at the druggist's counter. The word disinfectant, strictly speaking, means an article for the prevention of putrefaction by killing the germs which cause it. The public sometimes uses this word in a more general sense. It may mean to the layman a germicide, or an agent to prevent decomposition caused by germs; or a substance intended to remove a bad odour—that is, a deodorant. I shall not use this word disinfectant in a narrowed sense, but will define disinfect at the outset as meaning to kill low forms of life, particularly bacteria, which are dangerous to human comfort, health, or life. The disinfectant, or germ-killer, to properly perform his work, must know something of the size, shape, and the habits and locations of his prey, and as the hunter studies the habits and peculiarities of his game, and arranges his collection of weapons so as to have each available for its particular work of killing, so must the germ-hunter study the peculiarities of germs and arrange his weapons, the disinfectants. The commoner living things he may find it desirable to kill I have arranged into four groups: bacteria, which are a very low form of fungi, or parasitic plants; sporozoa, like the plasmodium malarie; parasitic worms; and parasitic mites and insects.

GERMS: WHAT THEY ARE.

Germs, sometimes called bacteria or fission fungi, are minute, usually one-celled plants which are extremely small, some of them being only 1-25000th of an inch in diameter. They move with a vibratile motion by means of tiny thread-like projections called flagella, which are whirled round with velocity and thus cause the plant to move about in the water or other liquid which is its home. They reproduce with extreme rapidity, either by splitting in half or by forming spores. An average time for this reproductive process by splitting to take place in an active germ may be fixed at half an hour; calculating at this

rate, from one germ may be produced in twenty-four hours something like 250,000,000—that is, unless the active reproductive work of the germs is interfered with by lack of food, water, change of the temperature, or other check to the process. Without going too deeply into the subject of bacteriology, we may group these germs into four divisions: those that are round, looking like tiny dots, or globes; those that are spiral in shape; those that are shaped like short rods; and those that are cubical. The first group, the cocci, includes the ordinary bacteria of putrefaction; a double coccus, or diplococcus, which is frequently found in the mouths of healthy individuals, is the cause of a form of pneumonia. The second group, the bacilli, among many others, includes that extremely dangerous and too frequently fatal germ which causes consumption; the third group, the spirilli, includes many forms which cause various malignant fevers; and the fourth group, the sarcinae, includes a species found in the stomach of man in many forms of indigestion (they appear to bear a close causative relation to indigestion). The spores are rounded bodies which appear within the germs; they are extremely resistant to disinfection and will endure great heat or cold and still retain the power of developing into an adult germ. Germs require a sufficient amount of food, gas, usually oxygen, water, and the presence of a suitable temperature. The removal of any one of these conditions, or the introduction of a poison, will prevent the development of the germ and will kill it. Germs, like all other living things, produce, as a result of their life action, certain waste material called ptomaines, which are extremely poisonous to every form of life. Germs cling to moisture, and owing to this peculiarity, a wet mass of putrefying material is not dangerous, as the germs in it, some of which may be filled up with spores, cling to it until every drop of water has evaporated; then, however, when the material becomes entirely dry and has become pulverized by the action of the elements, or has been ground under the heels of pedestrians, the germs and their spores cling to the tiny, dust-like fragments of material that are borne in a thousand directions by a gust of wind, each germ or spore being capable of starting a putrefactive process in a new place. This property of rapid reproduction and rapid dissemination accounts for the universal presence of germs, or their spores.

DIFFERENT DISINFECTANTS ARE REQUIRED FOR DIFFERENT PURPOSES.

The properties of rapid reproduction and the extremely small size and lightness of the germs enable them, in the first place, to produce large quantities of off-spring; in the second place to be carried everywhere by the most varied agents; animals (particularly insects), plants, also wind and water, all helping the process, and even the smallest particles of food may be utilized by them. The animal parasites that come within the province of this paper we will consider later on. Having learned something of our prey, we must consider also the location of the particular colony of germs which we desire to attack. If the germ is located in or on the body, our disinfectant must be of a character which does the greatest possible harm to the germ and the least possible harm to the man. If the germs are located in clothing, in utensils, or in the walls of rooms attached to dust, the same care in selection is not necessary. As regards location, we may group our disinfectants into those that are used to kill germs which are not on or in the body, and those which disinfect rooms, walls, closets, furniture, utensils of various kinds (cooking and eating), and receptacles for secretions, the most public and dangerous of which is the spittoon. In disinfecting a part of the body, we may be required to kill germs located on the outside of the body and which are, therefore, readily accessible, or internal disinfectants may be necessary.

External disinfection may be applied to the unbroken surface of the skin, as after scarlet fever, when the flaking particles of cuticle which contain scarlet fever spores require attention: or it may be necessary to disinfect

broken surfaces, wounds, or contusions. Under external disinfection we may class also killing of the scalp parasites, and disinfection of the feet which civilized man has encased in shoes; the natural penalty of this artificial covering which prevents the access of air and the evaporation of sweat being to favour the development of germs. Internally, it may be necessary to disinfect the food tube of germs or worms, the air tube, or the blood. Having considered the possible location of our prey, let us now consider the means at our disposal for killing it. These means may be grouped into physical disinfectants and chemical disinfectants; the former consist of light, variations of temperature, air, water, and the mechanical removal of masses of germs, usually those contained in secretions. The chemical disinfectants include a vast number of substances, the list growing larger year by year, among which we shall select only those that are commonly used without a prescription from a physician, and which are comparatively harmless. The most common of them are sugar, salt, glycerine, alcohol, soap, lime, and borax. Carbolic acid and the coal-tar derivatives, creosote, antipyrine, acetanilid, etc.; iodine and its preparations, especially aristol; mercury, both in the form of calomel and corrosive sublimate, and formaldehyde—these are among the more widely used of the stronger disinfectants.

The principal deodorants which may be of service to the druggist are bromine, chlorine, potassium permanganate, and charcoal. Bromine is a sufficiently powerful deodorant to kill the odour of street gas.

DISINFECTION BY HEAT.

The best method of disinfecting by heat is by burning, and it is advisable to use for the removal of masses of secretions fragments of new cheap material, like cotton, paper, etc., thus avoiding the introduction of new germs, and accomplishing the complete destruction of the old ones. The effects of natural variations of temperature upon germs are well marked; certain germs, notably those of yellow fever, are adversely affected by cold; others, like those of influenza, flourish in cold climates and during cold weather. It seems possible that an artificial change of climate might be accomplished by heating the sick-room of the influenza patient and arranging its degree of humidity and the supply of air so as closely to approximate it to a climate unsuited to the development of the germs and thus to facilitate convalescence. The beneficial effect of the hot temperature of Turkish baths may be due not merely to assisting the removal of the outer layer of cuticle and the cleansing of the body from germs, but to affecting adversely many species of disease germs which find it difficult to live in the heat. Disinfection by boiling is applied either to foods, or to instruments and utensils. The sterilizing of milk by boiling is a process too well known to require any description. It may not be so well known, however, that milk can be sterilized, without changing its taste materially, by bringing it to a temperature many degrees below boiling point, this being accomplished by exposure of the vessel containing milk to the action of steam, instead of boiling the milk, the inrush of dust-laden germs from the atmosphere during the subsequent cooling being prevented by a plug or cork of cotton. Among other foods that are sterilized by boiling, and which are liable to contain parasites which are dangerous to health, are meats, some kinds of which may contain the germs of consumption or the live eggs of worms, notably tapeworm and trichinae; water, which may contain the malarial plasmodium, the typhoid germ, or during an epidemic various other disease germs; eggs, which may contain parasitic infectious worms, etc.

Eating utensils used by those who are suffering from diseases should be sterilized. Consumption, which causes thousands of deaths a year in the borough of Manhattan alone, may owe its prevalence partly to unsterilized eating utensils. It seems that some law of inspection and penalty could guarantee to the public a dinner free

from infectious germs. Some germs are extremely resistant to boiling. The spores of the hay bacillus can endure boiling prolonged for several hours. It has been found that some time may be saved by the use of interrupted boiling in place of continuous boiling. If we boil an infusion of germs and then allow it to cool, the spores which resisted the first boiling will, during the short period of cooling, develop into adult germs. If the infusion then be boiled again, before this second crop of germs has had time to produce spores, the infusion will be absolutely sterile and devoid of germ life.

SUNLIGHT, SOAP-SUDS, AND COMMON SODA.

Sunlight has a marked germ-killing effect, due to the short-wave rays. The arc light, which resembles sunlight greatly, has lately been used with some success for the cure of germ skin diseases and syphilis. Germs prefer, as we all know, dark, damp places, where growth, favoured by the darkness, proceeds more rapidly than in sunlight. Water acts as a disinfectant by reason of the oxygen which is dissolved in it—that is, oxidation or burning proceeds in it, though with extreme slowness. To be effective as a disinfectant, a fresh supply must constantly be used. Hydrogen dioxide is an extremely active oxidizer, or burner, and therefore an excellent disinfectant. It has been used in weak solution in the most varied manner; as a disinfectant, and appears to be of particular value in irregular contused and festering wounds as a pus searcher.

Soap-suds are readily made an effective disinfectant by adding an ounce of common soda to twelve quarts of water and soft soap mixed (as recommended by the New York Board of Health; the same authority recommends that a stronger soap and soda solution may be made in which one-half pound of soda is used to the same quantity of water). Soap is a very strong germicide, even in weak solutions. A point of some importance to druggists is the thorough cleansing of the hands before touching wounds, burns, or, in fact, any broken surface of the body. The druggist owes it to himself as well as to his clients to cleanse his hands thoroughly after handling a bottle or package which has been in a home occupied by a sufferer from a contagious disease. Some of these diseases may inoculate through any of those slight wounds about the matrix of the nails which are often ignored, or may start up a suppurative disease of the eye by being transferred to that organ by means of a simple act of rubbing due to a possible slight irritation of the eye. These germs should not be allowed to adhere to the fingers of the druggist or be transferred to a package sent to a different client.

Lime-water, which is nothing but a solution of calcium hydrate in water, is valueless as a disinfectant. Borax may be used in dilute solution, or boracic acid in powder, or in a saturated solution. Carbolic acid is most used up to about the strength of five per cent.; the addition of an equal quantity of glycerine increases its solubility. The bichloride of mercury, of which a solution of 1 to 1000 is a most effective strength, is the best and most certain of disinfectants. The "mild" chloride of mercury, or calomel, mixed with an equal quantity of starch, is an extremely effective dusting powder. Other dusting powders which are effective in killing germs about the body are chlorate of potassium, salicylic acid, boracic acid, and bismuth sub-nitrate or sub-carbonate.

DISINFECTING THE SICK-ROOM.

During infectious illness it is extremely difficult to keep the air of the sick-room sterile. Yet by strict attention to the renewal of the fresh air supply and by hanging up about the room cloths saturated with a two to five per cent. solution of carbolic acid, or a 1:2000 solution of bichloride of mercury, the germs attached to any dust which may be brought into contact with the wet cloths by currents of circulating air, will be killed, and the air may thus in some measure be disinfected; the vapour of carbolic acid exerts disinfection somewhat in this air by its diffusibility. The sick-room should be kept as free from

germs as possible by the proper removal of the secretions of the patient and their immediate destruction by fire. The admittance of visitors to the sick-room and the consequent trampling of carpets and shaking of upholstery, curtains, etc., may cause dust to rise into the air and may reinfect the patient. It is possible that many cases of relapse are traceable to this cause. Soiled clothing should be soaked in a five-per-cent. solution of carbolic acid (commercial carbolic acid is not suitable) or a 1-to-1000 solution of bichloride of mercury for several hours and then boiled. When of little value it should be burned.

Excretions and discharges of those suffering from infectious diseases should be received into a vessel containing a quantity of five-per-cent. solution of carbolic acid or 1-to-1000 solution of mercury bichloride, two volumes of the disinfectant to one volume of discharge being required. The customary neglect of this precaution of disinfecting the discharges from patients suffering from influenza is probably a material factor in the causation of gripe epidemics.

Traps in laboratory sinks may be cleaned with hot strong soda solution, followed by five-per-cent. solution of carbolic acid.

THE CUSPIDOR NEEDS ATTENTION.

The spittoon in a drug store may become a source of danger to the druggist himself or to his clients. Those suffering from certain contagious diseases, like consumption, etc., usually go to the drug store themselves to have their prescriptions filled, and thus the spittoon in the drug store becomes the special receptacle for numbers of various species of germs. If the spittoon contain a layer of sand or sawdust saturated with a suitable quantity of 1-to-1000 bichloride solution, and if it be cleaned once daily with soap and hot water, the danger from this source is reduced to a minimum.

Externally for unbroken surfaces soap is an excellent disinfectant. In many forms of skin irritation, however, the application of water seems to increase the irritation, and it may be necessary to apply some mild antiseptic ointment. Burns may be treated by the application of ointment of oxide of zinc, and carbolic acid one-per-cent. solution reduces pain. Boracic acid alone, or boracic acid mixed with aristol, makes an excellent dressing powder for burns, wounds, abscesses, or ulcers, and is absolutely harmless. A one-per-cent. solution of carbolic acid quickly relieves the stinging pain of a burn.

CORRECTING VARIOUS BODY ODOURS.

For excessive sweating of the feet salicylic acid may be used in powder, and is extremely effective; the occasional alternation of an ointment of oxide of zinc may be necessary. Pure water frequently prolongs the fetor, but the application of a solution of potassium permanganate acts as a disinfectant as well, this being due to its readiness to part with some of its oxygen. It is frequently used to correct the fetor of cancer, ulcers, caries, abscesses, etc., or in the strength of one grain to the ounce may be used for the foul breath due to local causes, or may be applied to the armpits. To disinfect the mouth the most effective and simplest remedies are a few drops of a mixture of carbolic acid and glycerine, equal parts, in a glass of water; a mixture of a half-ounce each of chlorine water and simple syrup with three ounces of water; a solution of potassium permanganate thirty grains to the pint of water; or a little tincture of benzoine.

For chapped lips, hands, or nipples, Stille recommends a mixture of compound tincture of benzoine and glycerine. Solutions of chlorate of potash sixty grains to the ounce have long been employed in disinfection of the throat; usually glycerine or syrup is added, and a small quantity of the solution is swallowed to bring it into better contact with the tonsils.

For catarrh of the nasal and other mucous membranes the fluid extract of hydrastis is an effective germ-killer.

Whisky is an excellent germicide, and makes an

effective wound disinfectant. For general use, the ideal wound disinfectant, non-irritating, harmless, and effective, is powdered boric acid; it makes an ideal wash (in saturated solution diluted with two or three volumes of water). Sometimes a little rose-water is added to this solution, and increases its efficacy. Among the many remedies recommended for nasal inhalation is a snuff of boracic acid, this substance appearing to be especially effective in the nasal discharge which so frequently follows influenza.

For ingrowing toe-nail and the germ growth which inflames the tissues around the nail, it has been recommended to apply to the edge of the nail, and the raw tissue adjacent a solution of potassium chlorate in water, two drachms to the ounce, until the offending edge of the nail can be removed without excessive pain. The hands or any instrument applied to an ingrowing toe-nail must be surgically clean—that is, freshly cleansed and free from germs.

INTERNAL DISINFECTION

will be considered as affecting the food tube, the air tubes, and the blood.

For disinfection of the digestive tube, Bouchard recommends the drinking of a wineglassful daily, or more frequently, of a saturated solution of carbon disulphide in water, in which it is slightly soluble, a few drops of essence of peppermint being added to each quart of the solution to disguise the odour. The same authority recommends as an intestinal disinfectant, charcoal made into a paste with water, a couple of drops of oil of bergamot being added, and a tablespoonful of this constituting a dose for an adult.

TO EXPEL TAPEWORM.

The food tube is liable to be infested by worms, the eggs of which are introduced into the body usually in underdone or rare meats. To expel tapeworm, male-fern, pomegranate, kousso (brayera), and kamala have been used, but the expulsion of the head is difficult, if not impossible, without preliminary treatment, consisting principally of thoroughly emptying the food canal so as to allow the remedy to come into direct contact with the head of the worm. Calomel with santonin or spigelia expels the round worm; santonin must be administered with caution.

Decoction of aloes and infusion of quassia may be used for threadworms, the location of the worms being considered in applying the remedy.

Other effective

INTESTINAL GERM-KILLERS

are potassium permanganate, one or two grains in a large quantity of water, and bismuth subnitrate five to fifteen grains. Vomiting, prolonged, obstinate, and probably caused by fermentation or putrefaction, may be promptly stopped by administering a drop of glycerine and a drop of carboic acid in a glass of water.

Glycerine, a teaspoonful in water after meals, is also an effective preventive of food fermentation.

The itch mite (scabies) may be readily killed by the proper application of vinegar, alcohol, or turpentine. The louse may be removed by washing the head with vinegar or green soap.

Disinfection of the air tubes, as well as disinfection of the blood, is outside the province of the druggist. The druggist owes it to himself, as well as to his profession and the public, to dispense only those disinfectants which he is certain, so far as his knowledge can go, are absolutely pure. In order to avoid unnecessary handling of these drugs, and to reduce the chances of possible error, it seems wise to order the goods in original packages—that is, in packages put up by the manufacturer—and to insist upon having these delivered with the manufacturer's seal unbroken and with his responsibility definitely fixed by his own label.—Portions of a paper read some time ago before the King's County Pharmaceutical Society.

PROPOSED FOOD AND DRUGS ACT INSPECTOR FOR THE BOARD OF AGRICULTURE.

THE quarterly meeting of the Council of the Royal Lancashire Agricultural Society was held at Preston, on September 27th. From the minutes of a meeting of the Parliamentary Committee it appeared that it had been resolved to dispense with the services of the inspector under the Food and Drugs Act upon the new Act coming into force, and it was decided to recommend Mr. Parkinson to the Board of Agriculture as a competent inspector. A reply from the Board of Agriculture stated that they were well aware of the able services Mr. Parkinson had rendered, and should they find it advisable to make any appointment, they would bear in mind the committee's recommendation. The Parliamentary Committee's report contained the following: "The Food and Drugs Act passed last session comes into force on January 1st next. Your committee sincerely hope it may prove successful in checking adulteration and unfair competition. We feel sure that members will appreciate the work done by their inspector. This work has, in your committee's opinion, been of great service in drawing public attention to the magnitude of adulteration, and in showing the necessity of legislation to deal with it. We recommend that your inspectors's services be continued till the Act comes into force."

Correspondence.

TO THE EDITOR OF *Food and Sanitation*.

SYRUP PROSECUTIONS.

SIR,—We have been favoured with copies of certain newspapers containing articles with such titles as "Defrauding the Poor," "Adulterated Syrup," "Heavy Penalties," &c.

Some time ago we received notice that an inspector under the Food and Drugs Act had bought at Brewood some of our canned syrup, and that a prosecution was pending against the vendor because the syrup contained glucose. When the case came on at Penkridge the chairman (Lord Hatherton) made, according to the newspaper reports, some statements (from which it is quite plain he was only imperfectly informed) condemning in their absence a firm who had not been cited to appear before him. We looked into the matter and found that the wholesale dealer, from whom it was said the syrup had been bought had purchased it in 1898, before the decision which for the first time, held that glucose was an improper article to mix in syrup unless notified. He had been fully warned by us of the risk respecting any stock of Crosfield's syrup he may have on hand of 1898 packing, and labels offered to him to attach to such syrup; also he was told that all syrup sold to him during 1899 had been properly described and had been appropriately labelled, as all our syrup had been since the decision in December last. Since that time, as all the trade knows, we have advocated very strongly the use of pure cane syrups. If a wholesale dealer persistently ignores all warnings, and sends out old stock without following the manufacturer's advice as to its being correctly labelled according to the most recent decisions under the Food and Drugs Act, then surely the manufacturer may be excused from blame, as well as from attending the court and paying expenses. It would be as reasonable to expect a coffee merchant to defend some grocer who had bought coffee and chicory from him and sold the mixture as pure coffee.

We have every respect for the Bench, but in all fairness think that a magistrate should not go out of his way to asperse manufacturers who have complied in every respect with the law as universally understood, and who were not before him.

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6, Stanley Street, Liverpool, September 27th.

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Food and Sanitation.

SATURDAY, OCTOBER 14, 1899.

MARGARINE PROSECUTIONS.

At Reading, Frederick O. Chorley, grocer, 27, Greyfriars Road, was summoned for selling and exposing for sale an article purporting to be butter which was not in fact butter, on the 4th September. He pleaded not guilty. The Town Clerk (Mr. Henry Day) prosecuted, and called Mr. Henry Wright, Inspector of Weights and Measures, and Inspector under the Sale of Food and Drugs Act, 1885, said on the 4th September he went to defendant's shop and found exposed for sale on a marble slab

three parcels or heaps of what appeared to be butter. There was no label or mark on either to show that it was not for sale, or that it was not butter. Witness asked for "half-a-pound of that butter," pointing to the middle parcel, upon which defendant took a piece of paper and a knife and proceeded to cut from one of the other parcels. Witness said that was not what he asked for—he wanted some from the middle parcel. Defendant said "That is not for sale," and witness replied "What is it here for; it is exposed in precisely the same manner as the other butter, and I demand a half-pound." He then served witness, who paid him 4½d., the price demanded, and received it in a paper on which was printed "pure butter." Witness then notified his intention of having the stuff analysed, and divided and labelled the purchase in three parts in the usual manner, giving one to defendant, submitting the second to Dr. Ashby, and now producing the third. On September 16th he received from Dr. Ashby, the Public Analyst, the certificate of analysis, which was to the effect that the percentage of foreign ingredients—viz., margarine—was 100 per cent., consisting of fat other than butter fat, flavoured with milk, and coloured yellow. Cross examined.—After he had been served with the half-pound there was very little, if any, left of the particular heap. The word "margarine" was never used. Defendant did say afterwards, "You did not ask for butter, you asked for 'that'"; to which witness replied "I pointed to that heap, and asked for 'that butter.'" Defendant: You ought to be ashamed of yourself, Mr. Wright. The Clerk: Did you believe you were being served with butter?—I did. Defendant said he took up the paper marked "pure butter" with the intention of serving pure butter. As to the margarine heap he had just served 3lb. and removed the label, only leaving the ½lb. which Mr. Wright bought. After Mr. Wright had divided the sample, he asserted, he told him he had served him with margarine. The Chairman said the defence did not at all help Mr. Chorley. It was a most important Act for the protection of the public, and it was clear that the stuff was sold for butter. The maximum penalty was £20, and defendant—this being the first offence—would be fined £5 and 8s. costs. It was a very serious offence.

JAMES GORMLEY, provision dealer, 97, Derby Street, was summoned at Bolton, on September 30th, on a charge of not having margarine labelled as required by the Act; and F. Regan, assistant, was charged with having sold margarine not bearing a proper label upon the wrapper. It was stated that on September 12th a messenger from a Corporation inspector went into the shop and asked for half a pound of Kiel butter, and that the article with which she was supplied was in plain paper, and not showing a label that it was margarine. On analysis the sample was found to contain 62 per cent. of fat foreign to butter. The defendant was fined £20 and costs; the summons against Regan was dismissed.

At Greenwich, Thomas Llewellyn Edwards, of Clarence Street, Rotherhithe, was fined 40s., with 2s. costs on Saturday for selling butter adulterated with 94 per cent. of margarine, and John Morgan, of Lower Road, Deptford, was similarly fined for a like offence, and also 10s., and 2s. costs, for exposing margarine for sale without a label marking it as such.

At Newbury, Mrs. Jane Wise, an elderly and respectably dressed woman, was summoned under Section 5 of the Food and Drugs Act of 1875, for unlawfully selling as butter an adulterated mixture, which contained 83 parts of foreign fats, and only four of butter. Mr. Henry Creed, of Reading, appeared to prosecute for the Chief Constable of Berks, and in opening the proceedings said this was a very hard case. Mrs. Wise was a most respectable woman, carrying on a small business at Thatcham. She had been in the habit of purchasing her butter of Mr. W. E. Lewendon, grocer, of Oxford Street, Newbury, and paid him 10½d. per pound for the stuff described as butter on the invoice. Mr. Creed said the blame could not be attached to Mrs. Wise, but unfortunately they could not

prosecute Lewendon, as she had not taken from him the usual warranty. Mrs. Wise had been misled, and had quite unwittingly committed a breach of the law. He was instructed to ask for the infliction of a light penalty. Supt. Gamble, of Reading, said that on August 29th he paid a visit to Mrs. Wise's shop, and purchased a pound of the butter for which he paid 1s. 1d. He then told her who he was, and said he was going to submit the butter to analysis. Mrs. Wise stated on oath that she had purchased from Mr. Lewendon, and had always thought it to be butter. Nothing was ever said to her about any "mixture." The Chairman said the magistrates considered this a case in which Mrs. Wise had been very hardly used indeed. They had decided to remit the costs, and impose the nominal fine of 1s.—Mrs. Wise appeared very grateful for the decision.

MR. GEORGE MORGAN, grocer, 1, Ripley Road, Belvedere (Kent), was summoned on October 2nd, for selling adulterated butter. The sample was certified by the County Analyst to consist of 6 per cent. of butter and 94 per cent. of margarine. A fine of 20s. and costs was imposed.

MILK ADULTERATION.

THE Southsea Dairy Company, Limited, of 29, Marmion Road, Southsea, was summoned on October 3rd under the Food and Drugs (Amendment) Act, for selling milk which had 33 per cent. of cream extracted, to Colonel Pengelly, the Commandant of the Royal Marine Artillery Barracks, Eastney, on August 28th. Mr. G. H. King appeared for the prosecution, and Mr. Brutton (of Messrs. Hyde, Hobbs, and Brutton) defended. Inspector H. J. Bicknell stated that he went to the cook house at Eastney Barracks, and there saw a churn belonging to the Southsea Dairy Company, Limited. With the assistance of a Marine named Nash he took a sample, and the Public Analyst found that at least 33 per cent. of cream had been abstracted. Two Marines named Miller and Nash corroborated. Mr. Brutton stated that the Company had served the Barracks with milk for the past 18 years, and that no complaint with regard to the quality of milk had ever been made before. Several witnesses were called for the defence, and each denied that any cream had been abstracted. The Bench convicted, and fined the defendants £10 and £1 0s. 6d. costs. There was a second charge against the defendants for selling milk to Colonel Pengelly, the Commandant of the Royal Marine Artillery, from which 6·7 per cent. of cream had been abstracted, on the 1st September. In this case the Bench fined the defendants 40s., and 14s. 6d. costs.

At Yarmouth, on October 6th, James William Smith, dairyman, George Street, was summoned for selling adulterated milk. The Town Clerk prosecuted and Mr. H. Chamberlin defended. Inspector Hassall said he sent a man to defendant's for 1½ pints of milk. As soon as it was served the Inspector went in and received the "milk." The analyst's certificate showed 58 per cent. of pure milk and 42 per cent. of water. In cross-examination Inspector Hassall said that defendant had no shop, but milk was sold there, and a notice appeared to that effect. Defendant was a cabman, and Mrs. Smith was out at the time on her milk round. When his messenger went to the house a neighbour, Mrs. Folks, came across and supplied the "milk." It was taken from a flat earthen dish on the table. Defendant's place was on the Corporation register of milk shops. The defence was that no one was authorised by defendant or his wife to supply any milk in their absence. He kept pigs at Runham Vauxhall, and each night his custom was to deposit unsold milk and rinsings of the cans in a dish for the pigs. Mrs. Folks, out of pure neighbourliness, and without any instructions, went to the house and supplied the milk. No man should be such an unmitigated idiot, Mr. Chamberlin said, as to adulterate milk to the extent of 42 per cent., and he laid stress on this adulteration as proving the truth of his statements.

Defendant's wife, in the box, stated that she left her house each morning at eight o'clock, to go on her rounds. Her overday milk and washings was always placed in a dish to distinguish it from the new milk, which was kept in tins. Mrs. Folks was not authorised to sell any milk for her, and had never sold it previously. Defendant said he had sold milk for ten years. Samples had been taken twice previously and found pure. Mrs. Folks said she served the milk as an act of kindness. She had never done so before, and this would probably be the last time. The chairman said that the manner in which the business was conducted showed carelessness, but the Bench considered the "milk" sold without authority, and therefore dismissed defendant.

Extraordinary Cases.

At the Luton Borough Police Court, on October 3rd, Joseph Andrews, Legrave Marsh, was summoned for selling milk containing 42 per cent. of added water on September 16th. Mr. Lathom appeared to prosecute on behalf of the Town Council. Defendant pleaded guilty to selling the milk, but not to putting the water in. Mr. Lathom said this would be found to be the most extraordinary milk case ever brought before them. This man Andrews had carried on business as a milk dealer in the town for sixteen years, and with the exception of one charge brought against him by the county authority there had been nothing against him all that time. On the Thursday before the information was laid, Inspector Wright stopped him and took a sample of his milk, and it was what transpired then that led to the summons to-day. The man gave an explanation to Mr. Wright, who believed his statements, and it was agreed by the Inspector to attend at the place where Andrews got his milk and take a sample before Andrews could possibly have done anything to it. On the Saturday, Inspector Wright was close by Pateman's shop in Collingdon Street, where the milk was obtained. The Inspector examined the man's cans before he went into the shop, and found them perfectly empty and clean. Andrews then went in and bought a certain quantity of milk, and before he had an opportunity of leaving Pateman's shop, the Inspector examined the milk and found it contained 42 per cent. of added water. The Town Council were bound to prosecute Andrews, who was really the victim. That was why he did not know how to plead. Though he was guilty in the law, he was a perfectly innocent man. He could not have touched it as the Inspector was on the spot the very minute he bought it. He (Mr. Lathom) was going to prove that three separate sorts of milk were sold by Pateman, every one of which was adulterated. Mr. George Sell, Town Clerk, proved receiving instructions from the Sanitary Committee to take proceedings in these cases. Charles Wright, Inspector under the Food and Drugs Act, said he remembered that Andrews came to him and asked him to look at his milk. He did so, and at Andrews' wish, took a sample home and tested it by his lactometer, which he found registered 75 per cent. of added water. In the morning, Andrews came to him and asked how he found it, and in consequence of what was said, he arranged to meet him on Saturday morning at the top of Collingdon Street at nine o'clock. Witness met him as arranged and examined the cans, which he found to be perfectly clean and empty. He followed him into Pateman's shop and never lost sight of him. Young Sidney Pateman handed Andrews the milk just as witness got into the shop. It was put in a pail, and the pail did not leave witness's sight. Witness asked Andrews for a pint of new milk, and he served him with it, charging 2d. The result of the analysis by Mr. A. E. Ekins, St. Albans, showed that it contained 42 per cent. of added water. It was impossible for Andrews to have done anything to it, as the sample was taken exactly as he saw Pateman, jun., give it to him. Andrews said it was all true what Mr. Wright had stated. He bought the milk innocently. Mr. Pateman: He had previously noticed the milk looked very bad, and called the attention of another milk-dealer named Holdstock to

it. Holdstock tasted it, and said, "You can even taste the water in it." The Chairman: On what condition did you buy the milk? Andrews: I bought it as new milk, and paid 10d. a gallon for it. The Chairman: Did you have any guarantee or anything of that sort? Andrews said he had no guarantee, but paid for it as he fetched it. He bought it as new milk, and sold it as such. The Chairman said the magistrates would convict in this case, but would suspend judgment until after the next had been heard.

William Pateman, Collington Street, was then charged with selling milk containing 17 per cent. of added water on September 16th. He was also summoned for selling milk containing 5 per cent. of added water on the same day. Pateman pleaded not guilty. Mr. Lathom prosecuted, and Mr. A. J. Wardle defended. Mr. Lathom said he was going to prove that this man Pateman, who carried on a considerable business, kept three qualities of milk for three different sets of customers, and not a single one of them was genuine. He sold off the counter from a vessel where they could go and buy a glass of milk. That was the best, and had been depreciated by 5 per cent. For his own customers, that his own carts supplied, he sold a mixture reduced by 17 per cent. of added water, and for Andrews, whose customers would blame him and not Pateman, it was reduced by 42 per cent. of added water. Mr. Lathom then spoke of the scheme arranged between Andrews and the Inspector, and said that he should prove by witnesses that Andrews had served customers for years with satisfaction, but they began to make complaints directly he took milk from Pateman. The latter, he added, after he was found out, tried to bring an innocent man into it. He wrote a letter to the Inspector, saying that he got a little milk from a man named Makepeace, and Makepeace must have sold him "scandalous milk." It would be proved, said Mr. Lathom, that Makepeace only sold him two gallons, and the idea that that could have reduced the whole quantity to the extent shown was ridiculous. Charles Wright the Inspector, then went into the box, and gave evidence bearing out Mr. Lathom's statement. He saw Andrews served with a pail of milk, and then asked young Pateman for a pint of new milk out of the same vessel. He took it from a pail at the back of the counter, and this was found to contain 17 per cent. of added water, the analyst's certificate, from Mr. A. E. Ekins, St. Albans, to this effect being produced. Afterwards, witness asked Mr. Pateman, sen., who came in, for pint of new milk out of the vessel on the counter, and that showed 5 per cent. of added water. The magistrates having deliberated for some time, the Chairman, addressing Andrews, said he would have to be convicted in this case, which was a very bad one. The Bench felt that he had been the victim of a very cruel fraud, and they sympathized with him, and congratulated him on the way in which he had acted. He had done a public service by calling the attention of the Inspector to the matter. He would be fined 6d., and 8s. 6d. costs. The money was paid by the Inspector. As to Pateman, the Chairman said they made no comment, but fined him £10, and £2 12s. 6d. costs in the case in which 17 per cent. of added water was proved, and dismissed the second case. Pateman asked for a week in which to pay, but Mr. Lathom objected. The Chairman said they could allow no time; the money would have to be paid that day.

WEIGHING PAPER WITH TEA.

At New Swindon Police Court Mr. James White, trading as the World's Tea Company, Marshalsea Road, London, was summoned at the instance of the Wilts County Council for applying a false trade description to six quarter-pound packets of tea at Swindon on September 1st. Mr. H. Bevor prosecuted, and Mr. Bodkin, barrister-at-law, defended. Mr. Bevor stated that the prosecution was undertaken because the tea in each case minus the wrapper and string did not weigh a quarter of a pound. Inspector Smith deposed to weighing the contents of the packages. The tea in one sold at 1s. 2d. per lb. was 12

grains short of a quarter of a pound; the others were deficient to the extent of 105, 107, 76, 78, and 103 grains respectively. The shortage was equal to about 1d. in 1s. 6d. worth of tea. For the defence Mr. Bodkin submitted that there was no mark or trade description in writing or print sufficient to cause the offence to fall within the provisions of the section under which the proceedings were taken. The question was whether the written statement of the price per pound was a sufficient statement, where not a pound, but a fractional part of a pound, had been purchased. There was no statement on the quarter or half-pound packets as to the weight, and on that ground he suggested that no offence had been committed. In the recent case against Lipton (Limited) the weight was distinctly stated on the packet. Mr. Bodkin further stated that at a meeting of the defendant company on August 31st stringent orders were given that at every branch every packet of tea should be undone and reweighed, but the notice to this effect sent to the Swindon branch actually crossed with the manager's letter stating that sample packets had been purchased by the inspector. Ever since the tea had been weighed without the paper. The Bench, understanding that the practice of weighing the wrapper had been discontinued, imposed a nominal penalty of 5s. and costs. A second summons against the branch manager was withdrawn.

WATER AT SPIRIT PRICE.

At Cheltenham, on October 5th, at the Police Court, Benjamin Ratcliffe, licensee of Collett's Brewery, St. Paul's, was summoned for selling, to the prejudice of Police Constable W. J. Lane, on the 8th September, a pint of whisky which was not of the quality of the article demanded, the said whisky containing only 62 per cent. of proof spirit, and being 38 degrees under proof, instead of 25 degrees under proof, as required by the statute. Mr. Lamb appeared for the defendant, and, on his behalf, admitted the offence. Defendant had been licensee of this house for twenty-one years, and this was the first charge which had ever been brought against him. The sale, he suggested, was the result of a misadventure. Defendant was fined £1, with 18s. 6d. costs.

ADULTERATED GROUND GINGER.

At Oswestry Petty Sessions, Ernest Barnett, grocer, Liverpool House, Beatrice Street, Oswestry, was charged with selling adulterated ground ginger on August 8th. Defendant, in admitting the offence, said he had only a few days previously taken over the business from Mr. John Davies. P. C. Bowyer gave evidence as to purchasing the ground ginger from defendant on the day in question, dividing it, and sending a sample to Mr. Blunt, the county analyst, who certified that the sample contained at least 4 per cent. of foreign mineral matter. The sample, he observed, was a dirty one. The ginger gave 9.2 per cent. of ash, of which rather more than one per cent. was sand. The Bench, thinking the case a hard one, ordered defendant to pay the costs, 6s. 6d.

SUGAR ADULTERATION.

At Pontypool, on September 30th, Caroline Cleaves, a grocer, of Abersychan, was summoned at the instance of the Monmouthshire County Council, for selling sugar which was not of the substance and quality demanded. Mr. H. S. Gustard, clerk to the Monmouthshire County Council, prosecuted, and Mr. Webb defended. Mr. Thomas Henry Lewis said he visited the defendant's shop, and asked her son for a pound of Demerara sugar. He made no remark as he delivered it. Witness produced the analyst's certificate, which showed that the sugar contained 0.30 per cent. of moisture, and 99.70 of white sugar crystals. There was a trace of aniline dye, which had been put in to make it

resemble genuine Demerara sugar. Mr. G. R. Thompson, county analyst, Newport, said that the original colour of the sugar he had analysed was white, while Demerara ranged in colour from yellow to dark yellow. Genuine Demerara sugar cost from 1s. 6d. to 3s. per cwt. more than white sugar. He had prepared solutions of pure Demerara sugar, and one of the sugars he had analysed, which showed that cotton-wool went a brilliant red when immersed in the adulterated solution. He could not say whether the aniline dye was injurious to health. Mr. Webb read a letter from Messrs. Gibbons and Co., Bristol, stating that all Demerara sugar was dyed, as the natural colour of Demerara was white or pale grey. This Mr. Thompson emphatically denied. Mrs. Cleaves said she bought the sugar from Messrs. Gibbons as Demerara, and she paid 15s. for 1 cwt. They could get coloured crystals cheaper. She ordered Demerara, and the sugar was invoiced as such. The sugar was sold as she received it, and she saw it served to the inspector. The article was sold at 2d. per lb., while the crystals could be bought at 2 lbs. for 3½d. A fine of 10s. was imposed, the Chairman remarking that Mrs. Cleaves had her remedy against the wholesale agents.

JANE PAYNE, another grocer, was summoned at the same court for selling adulterated Demerara sugar at Llanhilleth. Defendant's husband appeared. Mr. T. H. Lewis said he bought a pound of Demerara sugar from the defendant, for which he paid 2d. He produced a certificate showing that the sugar contained 0.54 per cent. of moisture, the remainder being white crystals, with a trace of aniline dye. Mr. Payne said he had bought the sugar from a neighbour until his own sugar came in. Fined 10s.

YEAST.

At Pocklington, on September 30th, George Todd, grocer, Pocklington, was summoned under the Food and Drugs Act. Mr. George H. Gibson stated that on September 7th, he purchased from Mr. Todd, three-quarters of a pound of yeast, and told him that it was his intention to have part of it analysed. He sent a sample that evening to the analyst, and the certificate he had received showed that it was of such a quality as to render it unsound and unfit for consumption. For the defence, Mr. Wilkinson contended that the yeast was good on the day it was sold, but that it had probably gone bad between that day and the day of the analyst's report, which was four days later. The Bench considered that the case had not been proved under the section under which it had been brought, and therefore dismissed it.

GOLDEN SYRUP.

At Chorley, on October 3rd, the Chorley Co-operative Society was summoned for selling adulterated syrup. The evidence for the prosecution was that on August 22nd, P.S. Jackson bought 2 lbs. of "golden" syrup, which on analysis was found to contain 20 per cent. of glucose syrup. Mr. Berry said the society had a warranty from the wholesale firm, Messrs. Crosfield and Co., of Liverpool, saying: "This golden syrup is guaranteed to be absolutely unadulterated, and is made from cane sugar only." It was singular that a sample taken from the same tank as that from which the officer was supplied had been analysed on behalf of Messrs. Crosfield, and was found to be pure golden syrup. Several witnesses were called, and it was stated that nothing was added to the syrup at Chorley. Superintendent Norris raised questions as to the validity of the warranty. The Chairman said the Bench believed the guarantee was given with the invoice for the syrup. At the same time they had the analysis showing there was 20 per cent. of glucose, and the guarantee was certainly hardly to be relied upon in the face of that evidence. The case against the defendant society would be dismissed on payment of costs, including the analyst's fee. Dr. Harris said he considered such a guarantee from a wholesale firm

was highly discreditable when one-fifth of the material was proved to be quite different to what was ordered. Mr. Berry pointed out that the analysis carried out for Messrs. Crosfield differed from that of the county analyst.

JAMES TAYLOR, grocer, 30, Seymour Street, was summoned for a similar offence. The sample obtained from his shop was found to contain about 25 per cent. of glucose syrup. Defendant said his daughter could not have supplied the officer with the stuff as golden syrup, which they only kept in tins. The Chairman said they did not know whether the offence was committed knowingly or unknowingly. Defendant would be fined 10s. 6d. and costs.

ADULTERATED CAMPHORATED OIL.

At Pontypool Petty Sessions, on September 30th, James Evans, grocer, was charged with selling adulterated camphorated oil at Six Bells. Mr. Lewis, Inspector to the Monmouthshire County Council, said he purchased a bottle of camphorated oil at defendant's shop, and gave 3d. for it. He produced the analyst's certificate, showing that the sample should have contained 20 per cent. of camphor, whereas it only contained 5 per cent. The bottle was marked as containing genuine camphorated oil. Mrs. Evans' defence was that the oil was purchased as a genuine article. The Bench inflicted a penalty of 10s.

SEIDLITZ POWDERS.

At Aylesbury Petty Sessions, Francis Purssell, grocer, of Walton Street, Aylesbury, was summoned for selling to the prejudice of the public one dozen adulterated seidlitz powders. Defendant said he merely sold them as he received them from the firm in London. Superintendent Pitson said that he bought one dozen seidlitz powders from Mr. Purssell's shop, telling him the purpose for which he wanted them, and defendant said, "I sell them to you as I received them from the firm." The Chairman observed that the paper on the box stated that they were improved powders, and did not profess that they were in accordance with the standard of the "British Pharmacopœia." Superintendent Pitson said he took his stand from the fact that he asked for a seidlitz powder, and expected to get it. After some consultation the Chairman said the Bench had gone carefully into the question and felt that they must convict, although there was no imputation against Mr. Purssell. A fine of £1 1s., including costs, would be imposed.

MEAT FOR SAUSAGES.

THIRTEEN hundredweight of meat consigned from Framlingham, and left at a London railway station, "until called for," was taken away by a carman to his own yard in Morning Lane, Hackney, where it was seized by Dr. Warry, the medical officer of health, as being unfit for food. The carman admitted that the meat was consigned to a sausage-maker, but would not divulge the latter's name, and yesterday Dr. Warry applied to Mr. Fordham, at the North London Police Court, for an order to destroy the stuff, which was in the court-yard. The magistrate went out and inspected the meat—a pulpy mass of various colours which, in the medical officer's opinion, was a mixture of horseflesh and diseased cow. His worship had no hesitation in condemning it, and hoped that the officials would be able to trace the consignor and the consignee.

FOOD FRAUDS IN AUSTRALIA.

THERE is a very liberal amount of tether allowed in in the matter of "adulteration of foods," says a correspondent of the *Grocer*. For instance, in the item of jams and preserves there is nothing to hinder manufacturers of "cheap and nasty" stuff, providing so-called "choice

jams" at the rate of five tins, 1 lb. net, for 1s. These jams are made from glucose at about £9 per ton and the inferior fruit available in the local market. Hence the manufacturer who pays £17 10s. or £18 for his sugar and buys only the choicest fruit finds it difficult to realise 4s. 6d. or 5s. per dozen for his goods. Then in the department of pickles, sauces, and condiments, any brand of London condiments can be obtained at about half the imported price from local manufacturers, who are for the most part foreigners. Happily this serious question is now being ventilated, and at a meeting of Ministers to view the exports of preserves being made by Messrs. Taylor Brothers for the Royal Household and distinguished personages in the United Kingdom, some very valuable comments were made upon the practices referred to. Mr. H. E. Pratten, the managing-director to the company named, has already taken steps to expose the adulteration complained of, and the early reform of the Food Adulteration Act is looked for. These facts go to show that the honest trader, in the absence of suitable legislation to protect him, has very serious drawbacks to contend with; and in the matter of condiments and preserves, consumers have nothing to choose between the very superior goods put up by firms such as that mentioned, or the wretched stuff which is offered as a substitute at a low price. No doubt English manufacturers suffer to an extent even greater than those locally interested.

A NEW EGG PRESERVING PROCESS.

THE discovery of a new egg-keeping process is reported from the Continent. It is the invention of a German chemist, and has as its main feature the subjection of the shells of eggs to a process which induces a chemical change in the outer surface of the shell, and thus renders it thoroughly air-tight. According to details, to which publicity have been given, the eggs are immersed for a short time in a solution of sulphuric acid, the effect of which is to convert the surface of the shell into sulphate of lime. Shells in their normal condition consist of carbonate of lime. By the complete exclusion of air, thus effected, the eggs are rendered capable of being kept for a considerable period without undergoing any deleterious change. A further advantage claimed for the new process is that eggs subjected to it do not burst when being cooked.

CHEAP WATER AND MILK ANALYSES.

COOKSTOWN Board of Guardians met on the 23rd inst. Mr. John B. Gunning-Moore, D.L., presiding. There were also present—Messrs. Robert Hassard, J.P.; R. Cluff, J.P.; Wm. Leeper, J.P.; John Adair, Charles Anderson, D. M. Bell, W. R. Crawford, R. J. Greer, Geo. Lewis, Jas. M'Farlane, Matthew Marcorry, W. H. Warnock, and James M'Gucken. One of the consulting staff of the British Analytical-Control, Sir Charles M. Cameron, was appointed analyst to the union at a salary of £10 a year, and a fee of 2s. 6d. per analysis in excess of twenty-four, and to do all analyses of milk, water, and liquors for the district council free of charge.

FACTS ABOUT CANNED SALMON.

ONE is getting so thoroughly used to hearing exaggerated statements as to tinned salmon, that it will be very interesting to read an account relative to that tasty table fish, and based upon fact. It is from the pen of Mr. Rush, M.D., who has had an opportunity of inspecting the Naas Harbour Cannery, America. Here is his statement:—

"The fishing industry in British Columbia is second only to mining, and scores of canneries on the Fraser, Skeena, and Naas rivers give employment to thousands of Indians, Chinese, and Japanese. An English syndicate controls the two canneries on the Naas river, and the

salmon is sent almost exclusively to the English market. If the Naas Harbour cannery is a sample of canneries in general, the most fastidious need not hesitate to add canned salmon to their bill of fare. Everything about the cannery is scrupulously clean, and great care is exercised in the most minute details. Successful fishing is a good deal of a fine art, and one must have a thorough knowledge of the waters to secure a good haul. Each boat is supplied with two men, one to handle the oars and the other the net, and a daily catch of less than one hundred fish per boat is not considered good fishing when there is a fair run. A small steam-boat makes regular trips to the fishing ground and brings the entire lot to the cannery. They are first thrown into a large room, where Chinamen remove the heads, tails, and fins, and then they are passed to Indian women, who remove the entrails and give the fish their first washing under running water. The partially cleaned fish is then passed to another company of women, who further scrub and soak it, and when this process is completed they hand it to Chinamen, who cut the fish into the required lengths for canning. Another company of women—some of whom work with their babies on their backs—fill the cans, after which women and children weigh each can and wipe it dry. This completes the work so far as the women and children are concerned. Chinamen now take the cans, attach the covers, and place them on a moving belt, and as the cans roll along the covers are made secure by the upper edge passing through a narrow groove filled with solder. They are then allowed to roll to another set of Chinamen, who quickly hermetically seal each can by soldering the small hole in the cover, putting each under water to insure that no leak has escaped notice. Now commences the cooking process. The cans are immersed in boiling water for an hour and five minutes. During the boiling more or less steam is generated within the can, causing the ends to bulge. After the cans are moved from the bath a Chinaman punctures each and allows the steam and water to escape. The cans are then finally sealed, and conveyed to larger retorts, heated to 238 degrees, where they are left for another hour and five minutes, and this completes the cooking of the salmon. From the retorts the cans are placed in a large airy room to cool, and are tested four successive times before being placed in the boxes for shipment. These goods are shipped to England by way of Cape Horn, and I am told the trip takes from three to four months. As the ship passes through the tropics twice on her homeward voyage the cans are not labelled until they reach their destination, the reason of which is obvious."

COMPOSITION OF BRANDY.

IN connection with the Health Congress at Blackpool a discussion upon the composition of brandy was introduced by Sir Charles Cameron. He said our Continental neighbours were producing by chemical means bodies possessing the necessary flavour and strength for the imitation of good brandy. Immense quantities of alcohol were produced by the fermentation of starch in various kinds of grain. That quantities of brandy held out as Cognac were not what they were said to be was clear from the fact that the wine produced in the Cognac district and used for distillation was quite insufficient to produce the large quantity of spirit sold under the name of Cognac brandy. The important question was whether the artificial product was equal to the real article. However we might endeavour to imitate genuine brandy, the medicinal properties could not be the same.

Prof. W. R. Smith said it had been perfectly clear for some time past that we were not getting pure wine-spirit as brandy, and therefore, medicinally, we were not obtaining the restorative which we expected to get. Statistics prepared by the French Government afforded convincing proof that the deficiency of the wine-spirit from the vines had to be made up in some other way, and the inference was that it was obtained from grains and the like.

Seeing that brandy is the one form of alcohol most frequently prescribed as a medicine, the uncertainty of being able to obtain genuine Coghac in cases of illness is serious. Substitutes are all very well for dietetic purposes, but for medicinal use they are useless, and may be injurious.

THE EFFECT OF LACTATION ON THE QUALITY OF MILK.

It is commonly supposed that the milk given by cows alters very considerably in its chemical composition and general character as the period of pregnancy advances; but an experiment which was conducted some time ago at the Iowa Agricultural Station did not go to support this view. In this experiment cows were taken, differing, in the average, 133 days since time of calving. The milk of each cow was kept to itself; all the cream was removed by a separator and churned, and the butter handled in the same way. The butter was judged by an expert, who could discover no difference whatever due to period of lactation.

That others do experience difficulty, both in creaming and in churning the milk of cows long in milk ("strippers"), is generally an accepted fact. The town experimenters are of the opinion that this difficulty is due to the fact that the cows are not fed a sufficiently succulent ration. The difficulty in creaming is believed to be due to increased viscousness in the milk, accompanied by reduced size of fat globules as the period of lactation advances. Succulent food, by increasing the flow of milk, tends to overcome this viscousness. The quality of the butter is preserved by the use of starters to hasten the ripening of the cream.

STRANGE POISONING BY FISH.

MR. GIBSON, deputy-coroner of Liverpool, held adjourned inquests on September 28th, on five women of middle age whose deaths were attributed to tainted food. The first case was that of Margaret McGarry, of Brentwood, who, it was stated, before going home on the 15th inst., ate some salt fish and potatoes at the stall of Mrs. Ann Brophy, of St. Martin's Market, Scotland Road. She was seized with violent pains in the stomach and died on the following Sunday. Professor Stewart, University College, who had made a post-mortem examination, said there was considerable inflammation of the intestines, but no other cause for death. A bacteriological examination of a small portion of intestines revealed a microbe of bacillus, *enteritides sporogenes*. This was a refractory microbe, which was not easily killed, and would stand boiling in water. It must have been taken into the body with some article of food, and it would lead to the formation of a poison which might be fatal in some cases and not in others. In this case, as death followed so soon after eating the fish, the bacillus had very probably had time to grow in the fish before it was eaten. The Coroner: If death took place within 24 hours, would that lead one to suppose that the fish was in a bad condition? The witness: It would lead one to suppose there must have been a fair sized dose of microbes administered. Mrs. Brophy, who sold the food, said she gave 18s. per cwt. for the fish, which she bought two or three times a week. She kept it at home and cut off each day the quantity she required. She boiled the fish and placed it under the tap in the market, and she declared the fish was fit for any one. The Coroner said that he did not see anything improper in the way the fish was treated. A verdict was returned that the deceased was poisoned by eating contaminated food. In the cases of Teresa Jane Dunn, Ellen Molloy, Catherine Kelly, and Hannah Gaul the evidence was of a similar character, and identical verdicts were returned. The foreman of the jury remarked at the close that it was deplorable that such wholesale poisoning should go on. The Coroner said the

medical officer of health was carefully investigating the matter. The foreman: It seems a horrible business. The Coroner: It is an extremely serious state of things. Five persons have been poisoned, and probably more. The foreman thought that the contents of the stall should be seized and examined. The Coroner stated that he could not exactly say what had been done. If there was serious contamination on the stall, the health authorities would not allow such a state of things to continue.

FOOD PRESERVATIVES.

The following extract from a paper on "Boron Compounds," prepared for the British Association at Dover, but sent in too late—"The marvellous antiseptic qualities of both borax and boracic acid ought, by this time, to be widely known, and their use for the preservation of milk and perishable articles of food in universal use. Unfortunately this is not at present the case, and milk vendors who, by using about forty grains to the gallon, can keep their commodity sweet and wholesome for days, when it would otherwise become sour, unmarketable, and swarming with bacilli in twenty-four hours, are being legally victimised by heavy fines for what is erroneously termed adulteration. These prosecutions are generally initiated by the public analysts, who go far beyond their true function in declaring that the small proportion found in the milk is injurious to those who use it. At the commencement of this absurd campaign, this injurious effect was predicted even in the case of adults, but this was so manifestly absurd that it is now dropped, and the analyst prosecutors influence the decision of some metropolitan magistrates by declaring that if harmless to adults, it would be injurious to infants brought up by hand."

LIQUID AIR A FAILURE FOR REFRIGERATION.

RECENT investigation by Armour & Co.'s representatives as to the utility of liquid air as a refrigerating agent have given negative results. G. B. Robbins, manager of the company's transportation department, and J. E. Smith, mechanical engineer at the packing-houses, who visited Prof. Charles Tripler at New York to examine his methods of applying the discovery to cold-producing purposes, have submitted an adverse report to their concern. "Prof. Tripler's laboratory experiments are very pretty," said Mr. Robbins, "but the use of liquid air for any practical purpose is about where it was a year ago. I am convinced, however, that the substance will find valuable applications in a commercial way before very long. Much able experimentation is being conducted, which must result in the development of means to contain and control the elusive fluid. Its production has already been greatly cheapened."

A NEW MILK PRESERVING PROCESS.

A NEW milk-preserving process is being put to a test on the continent. It is the invention of two Austrians, and takes the unusual form of preserving the milk not in a fluid condition but in the form of a powder. The milk about to be preserved is taken direct from the cow and placed in a vessel at a temperature of about 40 degrees Centigrade (equal to 104 degrees Fahrenheit), and is there kept until the whole of the water contained in it has evaporated. The resulting residue is then thoroughly dried in suitable chambers, and after complete dessication it is finally put into cans which are hermetically sealed. With the object of increasing the keeping quality of the powder, and rendering it more readily soluble, the milk, prior to being evaporated, has added to it about one-tenth per cent. of an alkiline carbonate which, when combined with fatty matters, forms a compound capable of easy solution in water. It is claimed for the new powder that it may be kept for years in these hermetically closed

vessels without its keeping being in any way adversely affected.

COMPOUND LARD.

THE term refined lard has long been used to designate a lard composed cheaply of cotton oil and stearine. The largest manufacturers of this kind of lard have now abandoned this term and are using the label "lard compound" instead. This is but just to the consumers of this article who are likely to be misled by the term refined lard. The prime steam lard in a state of fusion, the stearine also in a liquid condition, and the refined cotton oil are measured in the proportions to be used and placed in a tank at a temperature of 120 degrees to 160 degrees F. In this tank the ingredients are thoroughly mixed by means of paddles operated by machinery. After mixing, the compound lard passes at once to artificial coolers where it is chilled as soon as possible. It is thence run directly into small tin cans or large packages and prepared for market.

WHEN TO EAT FRUIT.

THE apple has always occupied a deservedly prominent position among fruits. It is at once nutritive and medicinal in its effects, and there are few fruits more popular. Other fruits which rank high in this respect are strawberries, currants, tomatoes, and figs, and, when in season, there are few more excellent fruits than the common blackberry. When at all possible, fruits should be taken before rather than after meals. Their medicinal effects are properly exercised only when taken on an empty stomach. Food specialists contend that the best time of day for taking fruits is just before breakfast.

Many who are otherwise keenly appreciative of the value of fruit as a food, display a great lack of judgment in the manner in which they take advantage of their valuable qualities. As is argued by a well-known food specialist, most people instead of taking fruit on an empty stomach, or in combination with simple grain preparations such as bread, eat them with oily foods, or take them at the end of a meal, after the stomach is already full, and perhaps the whole mass of food washed down with tea, coffee, or other liquid. Fruits to do their best work should be eaten either on an empty stomach or simply with bread—never with vegetables. In the morning they are not only exceedingly refreshing, but they serve as a natural stimulus to the digestive organs. The good effects that would follow the abundant use of fruits are often more than counterbalanced by the pernicious habit of saturating them with sugar; very few fruits, if thoroughly ripe and at their best, require any sugar, particularly if eaten in the raw state.

MILK AND DISEASE.

AT the Public Health Congress, Blackpool, Dr. J. Wheatley, Medical Officer of Health of Blackburn, introduced a discussion, "The Causation and Prevention of Diarrhœa in Children and Adults." Directing the remarks mainly to the question of summer diarrhœa in children, he expressed the opinion that milk was the vehicle of infection in the majority of cases. He warmly advocated the feeding of children from the breast, and quoted the results of the investigations by Dr. Hope in support of his contention. Where, he asked, did the milk become contaminated? Was the farm or the town the principal source of infection? Dr. Klein had stated that the contamination took place on the farm, but that was directly contrary to fact. Although the cause of the disease was somewhat obscure, there were many directions in which they might safely work. A strenuous effort should be made to obtain a clear milk supply, and they should safeguard it during collection and storage. The dry sweeping of streets was a direct cause of summer diarrhœa, the bacillus of which Dr. Klein had discovered

in street sweepings. More attention, Dr. Wheatley thought, should be paid to the form of the vessels in which the milk was kept; they should allow a play of air, while not allowing dust and organisms to enter.

Dr. Vacher, Medical Officer of Health, Cheshire County Council, agreed with the originator of the discussion as to the fact that food was the chief agency for conveying the disease, and that milk was the main offender; infection of milk was chiefly effected in the shops; the onus of the matter, therefore, did not lie with the rural districts, but largely with the urban. He also pointed out, in dealing with the statistics, that many children certified as dying through the disease had been known to be full of tubercle, and the death through symptoms like to diarrhœa, were the last stages of tuberculosis.

Dr. Russell (Paisley) said that he had found that diarrhœa was most prevalent among bottle-fed children and children fed on condensed milk.

Councillor Dr. Clarke (Liverpool) was rather inclined to doubt that milk was the main vehicle by which diarrhœa was caused in children. Twenty-five years ago he came to the opinion that there was a more general cause—that the atmospheric conditions prevailing in the dry summer weather was the fruitful source of this disease. As to the dry sweeping of streets, he thought it was simply criminal on the part of any Municipal Authority to allow its workmen to raise this noxious putrefying dust, which not only found its way into the houses, but into the mouths and throats of people as they walked along the streets.

Dr. Mason was of opinion that the amusements and fashions of the day led to the responsibilities of home life sinking into oblivion. Laws in hygiene should begin early—in school. Sir Charles Cameron said that a high temperature in our towns meant a high zymotic death-rate; and he did not think heat could produce such conditions, holding in mind the healthiness of certain warm climates. Diarrhœa, he thought, was not produced by heat, but by something that heat affects; and the food supply was the most to blame, he believed, laying special stress on the dangers of milk as a means of infection. The poorer class of people generally got their milk once per day; and for the children there was one bottle, generally in a very filthy condition, so that a fruitful source was the milk given in bottles, in a state of incipient decomposition. Milk was, he believed, a cause of enteric fever, and certainly of a deal of infantile diarrhœa.

Dr. Daly (Manchester) gave it as his opinion that if mothers were prevented from working in factories and mills, and fed children from the breast, there would be less diarrhœa and less infantile mortality.

The President remarked that infantile mortality had been very great in Liverpool. In diarrhœa bacillus had been discovered in the tubes of dirty feeding bottles taken from mothers, and also in the milk thrown back by infants, some of which had brought about the death of a guinea pig into which it had been injected, showing that the contents of the bottle were of a virulent character.

Dr. J. Wheatley briefly replied to the different points raised.

MEAT EXTRACTS: THE FOOD VALUE OF "FLESH BASES."

DR. A. MCGILL, in a report to the Inland Revenue Department, Ottawa, Canada, observes that much has yet to be done by experimental physiologists before final pronouncement can be made upon the food value (if any) of the flesh bases, which in most instances form the chief portion of the nitrogenous material in meat extracts. The bases certainly differ among themselves in food value, and of course, if this is true of the flesh bases, it is *à fortiori* true of the various forms in which proteid matter occurs in these preparations, viz., as peptones, proteoses, acid albumins, and so forth.

Dr. McGill's experiments suggest that a part of the nitrogen in some meat preparations exists as urea. Urea certainly can have no food value, nor can one readily understand how the allegation that it is of use as a stimulant can be justified. No practical analytical method has been discovered to which nitrogen present as urea can be differentiated from that present as creatin, creatinin, and xanthin.

It is evident that the flesh bases cannot be called food-stuffs in the proper sense of that term. They represent a stage of the process by which complex nitrogenous compounds are changed to simple ones, supplying the energy so set free to the animal organism in the form of vital force. They may still have some food value, since they are not excreted as such, but undergo further simplification, till they appear as urea. It is certain that their food value is very much less than that of proteids proper. When once the urea stage is reached, the urea must be promptly got rid of.

Flesh bases are always present in small amounts in the blood, and in larger amounts in muscle tissues, and when fresh lean beef is treated with hot water the broth contains little more than these bases. Apart from any possible nutritive value, these flesh bases undoubtedly possess a stimulant action on the system, analogous to that exhibited by the alkaloids of tea, coffee, and cocoa, and it is beyond question that to this stimulating effect, rather than to any true nutritive power, they owe such value as they possess.—*Public Health*.

THE USE OF TUBERCULIN FOR LESSENING THE PREVALENCE OF TUBERCULOSIS AMONG CATTLE AND CHILDREN.

Is this a Matter for Government Interference?

By HAROLD SCURFIELD, M.D., Medical Officer of Health of Sunderland.

THERE are two reasons why the eradication of bovine tuberculosis is desirable; firstly, in the interests of the agricultural community, and, secondly, because the eradication of bovine tuberculosis necessarily entails a large reduction in the prevalence of one of the most fatal diseases of childhood, namely, tuberculosis or consumption of the bowels. The second reason is my excuse for addressing an audience such as the present on such a subject, though I also claim the ordinary interest of a citizen in the prosperity of every section of the community, and consequently in the delivery of the agricultural section from the ravages of tuberculosis. There is no need, I think, to produce proof to my present audience that cow's milk is capable of causing tuberculosis in those who drink it, but you will perhaps excuse my enumerating a few of the striking features in the chain of the evidence.

1. Tuberculosis in cattle and in man is the same disease, and is caused by the entrance into and growth in the body of the tubercle bacillus. The entrance of the bacillus into the body is so rarely effected before birth, that for all practical purposes it is true to say that every case of tuberculosis is due to infection.

2. Cows suffering from tuberculosis of the udder give milk containing tubercle bacilli.

3. Tuberculosis of the udder is not rare in cows and milk as ordinarily sold often contains tubercle bacilli.

Thus Bang says: "In any large herd in which tuberculosis is rife one will be certain to find one cow the milk of which contains tubercle bacilli, and which has tuberculosis of the udder."

Out of 144 samples of milk coming from Liverpool cowsheds, 4, or 2·8 per cent., were found to contain the

tubercle bacillus; but of 24 samples of milk "from the country," taken at Liverpool railway stations, 7, or 29 per cent., were found to contain the tubercle bacillus. In some later experiments in Liverpool, 12 out of 228 samples of town milk (i.e., 5·2 per cent.) were found to contain the bacillus, and 9 out of 67 samples of country milk (i.e., 13·4 per cent.). Similar results were obtained at Cambridge.

In Manchester 17 out of 93 samples of country milk were found to contain the tubercle bacillus. By permission of the farmers, the city veterinary officer visited sixteen farms from which the milk came, and on fourteen of these farms he found at least one cow with tuberculosis of the udder.

4. Animals such as calves, pigs, rabbits, guinea-pigs, cats and dogs fed on milk from cows suffering from tuberculosis of the udder develop tuberculosis of the bowels.

For obvious reasons one cannot try feeding experiments on human beings, and it is also equally obvious how difficult it is in the case of a human being who develops tuberculosis of the bowels to find out from what cows milk was obtained before the onset of this insidious illness. Instances, can, however, be quoted which are almost equivalent in value to feeding experiments on the human being. Here is an example cited by Nocard: The seventeen-years-old daughter of a doctor in Geneva had perfect health up to the end of 1892. No case of tuberculosis had occurred either on the father's or the mother's side of the family for several generations. In 1893 she began to waste away without the doctor being able to assign a cause for the wasting, and she died in a few months. A post-mortem examination showed that tuberculosis of the bowels was the cause of death. Further enquiry showed that the family used to spend every Sunday at a small estate on the hills, and that this young girl was particularly fond of milk fresh from the cow. Four of the five cows on the estate, when tested with tuberculin, were found to react, and were slaughtered. Two of the four had tubercular disease of the udder.

5. Human beings contract tuberculosis of the bowels just at the period of life when cow's milk forms the principal item in their diet.

6. The sanitary improvements of the last forty years have reduced the death-rate from tuberculosis of the lungs by 45 per cent., or nearly one-half. During the same period the death-rate from tuberculosis of the bowels among infants under one year old has increased by 27 per cent., and this increase has been coincident with an increase in the proportion of infants reared on the bottle instead of on their natural nutriment.

Tuberculosis of the breast is very rare in the human mother, but tuberculosis of the udder is comparatively common in the cow. We have, then, to contemplate the suggestive fact that the transfer of the infant from the rarely tubercular breast of the mother to the frequently tubercular udder of the cow has been coincident with an increase in the prevalence of tuberculosis of the bowels in the infant, and that this increase has taken place during a period when the prevalence of other forms of tuberculosis in the human being has been rapidly decreasing.

In concluding these preliminary remarks, I will quote two sentences from the report of the Royal Commission of 1890. They are as follows:—

"The milk of cows with tuberculosis of the udder possesses a virulence which can only be described as extraordinary," and

"No doubt the largest part of the tuberculosis which man obtains through his food is by means of milk containing tuberculous matter."

The opinion of those most competent to judge is that tuberculosis in cows is the great cause of tuberculosis of the bowels in children.

(To be continued next week.)

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Food and Sanitation.

SATURDAY, OCTOBER 21, 1899.

MILK ADULTERATION.

EVAN MORRIS, milk dealer, of Well Street, Hackney, was summoned to the North London Police Court on October 11th, for selling milk to which the public analyst certified that 11 per cent. of water had been added. Mr. H. T. Tiddeman, who prosecuted for the Hackney Vestry, produced the analyst's certificate, and added that the defendant had been once before fined £5 for a similar offence, when the percentage of adulteration was 10 per cent. The defendant did not deny this; but added that

he had not tampered with the milk. He sold the milk as he got it from the wholesale man. Mr. Fordham said he did not know what were the arrangements between the wholesale and the retail dealers; but he had considerable proofs of the frauds that were perpetrated upon the poor by unscrupulous traders. The poor depended a good deal upon the quality of their milk and it was a cruel fraud upon them to water it. The defendant would pay a fine of £10, and 12s. 6d. costs, or go to gaol for a month.

A Nice Point of Law.

At Clerkenwell, James Richards, of 145, Pentonville Road, was summoned by Inspector Bartlett, of the Clerkenwell Vestry, for selling milk on the 3rd September, containing 8.9 per cent. of added water. Mr. Kennedy fined him 40s., with 12s. 6d. costs.—John Davis, of 200, Gray's-inn Road, was summoned for selling, at Pentonville Road, milk containing 14.3 per cent. of added water, and from which 12 per cent. of the fat had been abstracted. A girl, acting as the agent of Inspector Bartlett, purchased a pennyworth of milk from the defendant, and asked him to "wait a little," for the arrival of the inspector who was approaching. Defendant, however, drove off. Inspector Bartlett said he witnessed the purchase from afar, and saw the defendant drive off on catching sight of him. As he could not divide the sample, he took the whole to the analyst, who handed witness a part of it. Mr. Ricketts, jun., said the defendant did not know that the inspector was in the vicinity, and as all the formalities had not been gone through, the summons must fail. Mr. Sandeman, for the Vestry, asked the Magistrates to hold that the defendant having wilfully driven off to avoid the formalities, he should be dealt with as having refused to accept an offer to divide the sample. Defendant had fraudulently avoided the offer, and if he was allowed to evade the inspector in this way other traders had only to run into their parlours and refuse to hear the offer of division. Mr. Ricketts said there was no evidence of fraud on the part of the defendant, and he might just as well say the inspector had watered the milk. There was no evidence to support either suggestion. Defendant on oath denied having seen the inspector. Mr. Kennedy adjourned the case for consideration of the point of law involved.—Albert Broughtwood (trading as Broughtwood and Sons), of 15, Islington Green, was summoned for selling milk, at Myddelton Square, containing 7.5 per cent. of added water. He was fined 20s., with 12s. 6d. costs.

At Clerkenwell, George Backhouse, of 47, Barnsbury Street, was summoned for selling milk containing 13 per cent. of added water. Mr. Bramall prosecuted for the Islington Vestry, and Mr. Chapman imposed a fine of 20s., with 12s. 6d. costs.—Noah Spiers, of 2, Garnault Place, Clerkenwell, was summoned for selling milk containing 15 per cent. of added water. He was fined 40s., with 12s. 6d. costs.—William Lewis, of 62, Popham Road, was summoned for selling milk from which 7 per cent. of its original fat had been abstracted. He was further summoned for selling milk containing 7 per cent. of added water. He was fined 40s., with 14s. 6d. costs.

At Chelmsford, Fredk. Waylett and Henry Waylett, milk sellers, of Widford, were summoned for selling adulterated milk. Mr. F. J. Snell, solicitor, defended. Mr. Raglan Somerset, inspector under the Food and Drugs Act, stated that he bought some of the milk, which, on being analysed, was believed to contain 12 per cent. of added water. Mr. Snell said the defendants had been in business 15 or 16 years, and this was the first complaint ever made against them. The milk was obtained from two of the best milk-producers in the district. The only way that the defendants could account for the state of the milk was that it was tampered with while they left it in a can on the footpath in Lady Lane during the time that they went to get a further supply. In support of this idea there was the fact that upon previous occasions they had lost milk in this way, and cans also. H. Waylett and a boy in his employment gave evidence bearing this out.

The Bench having retired, the Mayor announced that they had carefully considered the case, and had decided to inflict a fine of 7s. 6d., and 7s. 3d. costs upon each defendant.

The Callow Park Company Prosecutes a Farmer.

At Swansea, J. Lloyd Thomas, of Kidwelly, was summoned for selling milk to the Callow Park Milk Supply Company which had been adulterated. Mr. Jevons prosecuted, and Mr. W. Smith defended. Inspector Lambert said he took samples from two churns which defendant had supplied to the order of the Callow Park Company. The analyst's certificate showed that one churn was adulterated with water to the extent of 6 per cent., and the other to the extent of 19 per cent. Defendant was fined £10—£5 for each offence.

A Milkman Invites Public Analysis with Disastrous Results.

CHARLES A. BAKER, of 5, Albany Street, Stepney, appeared on October 12th to answer a summons charging him with selling adulterated milk. On September 10th Mr. J. Twaites, inspector under the Sale of Food and Drugs Act for Mile-End, purchased a sample of milk from a lad in defendant's employ. The milk on being analysed was found to contain 14 per cent. of added water. Mr. Twaites added that on defendant's barrow were the words, "Public Analysis Invited." Mr. Mead fined defendant, who said he sold the milk as he received it, 40s.—Richard Hartley, of 64, White Horse Lane, Stepney, was summoned by Mr. F. Lyon, also an inspector for Mile-End, for selling milk adulterated with 20 per cent. of added water. Defendant pleaded guilty, and Mr. Mead find him 40s.

A Prosecution Fails.

At Highgate Petty Sessions, the Manor Farm Dairy Company, of Highgate, was summoned by Inspector Bridge under the Food and Drugs Act, for selling milk which was adulterated with 7 per cent. of added water. William Vernon, assistant to Inspector Bridge, proved purchasing the milk and leaving a third part with the servant of the company of whom he purchased it, taking the other two third parts to Mr. Bridge at his office in Stroudgreen Road. Inspector Bridge proved receiving the samples spoken of. One he took an hour later to the public analyst from whom he had received a certificate produced, stating that the sample had been analysed, and had been found to contain 93 parts of new milk and 7 parts of added water. The analyst said he came to the conclusion that this was "added" water because the milk contained only 7.86 of solids other than fats, whereas new milk normally contained 8.5 of solids not fats. Cross-examined by Mr. Ricketts, who appeared for the defence, Mr. Bridge held that 7 per cent. was a safe margin to prosecute upon. Since January 9th he had taken 26 samples of the milk sold by this company, and up to now all had been genuine. Mr. Ricketts said the defendants had given notice to rely (under the 25th Section of the Act) upon the production of a warranty from the person from whom the milk was purchased, that it was "good and pure new milk." But supposing that the Bench were not satisfied, he should ask for the third sample to be sent to Somerset House for analysis, for analysts often differed very materially in their conclusions, and in addition to that it was agreed that 7 per cent. of water was not a safe margin for prosecution. Mr. Ricketts then traced the milk from the time it was received at Woodside Park Station at 9.30, to the time when it was sold to Vernon, between 11 and 12 o'clock, proving that it was sent out exactly as received. The Bench retired, and on their return to Court, put some further questions to Mr. Harvey, the defendant's manager, after which they dismissed the case.

An Impudent and Original Defence.

At the Birmingham Police Court (before Messrs. Fisher and Tange), John Henry Dale, farmer, Alspath Hall, Meriden, was charged with delivering adulterated milk to a retail trader. Inspector Jones (under the Food and Drugs Act) intercepted two churns at New Street

Station on September 12th, and on analysis the milk was found to be adulterated to the extent of 8 and 9 per cent. Samples taken a few days previously were all adulterated. Defendant said he considered the milk was very rich, and as milk was scarce he watered it. The Bench fined him £10 and costs or one month's imprisonment with hard labour.—Henry Brett, Oldfield Road, Sparkbrook, was fined 10s. and costs for selling milk containing 15 per cent. of water.—Frederick Weldon, Brunswick Road, Sparkbrook, 10s.—Evan Williams, Dolman Street, £5 and costs, for selling milk containing 10 per cent. of water.

DILUTED BEER.

At Greenwich, on October 10th, William Albert Barrett, of 47, Pomeroy Street, Hatcham, was summoned by the Inland Revenue authorities for diluting a barrel of beer with 8 per cent. of water. On behalf of the defendant it was stated that he informed the exciseman on his arrival that Mrs. Barratt had emptied a pail of water into the barrel in mistake for another which was ready for washing. The case was adjourned.

ADULTERATED NITRE.

At Ilkeston Petty Sessions, Eliza Noon, of 167, Nottingham Road, Ilkeston, was summoned for that, on the 2nd inst., she sold to Joseph Hewitt, an officer of Inland Revenue, six ounces of sweet spirits of nitre not of the nature, substance, and quality required by law, there being in it 86.5 parts of nitre and 13.5 parts of added water, while its specific gravity was 873.5. Capt. Sandys, inspector under the Food and Drugs Act, prosecuted. Mr. White, county analyst, stated that the water could not have got into the nitre by natural causes, but must have been added to the spirit. The specific gravity was also 873.5, while only 84.2 was permitted by law. Defendant said she sold the nitre in the same condition as she received it. She had had it in stock a year and a half, but would take good care she did not sell any more. Fined 5s. and £1 2s. costs.

WATER AT SPIRIT PRICE.

At Swansea, Harry Williams, of the Rose and Crown public house, for selling adulterated gin; J. Lewis, of the Copperman's Arms, Pentre Guinea Road, for selling adulterated whisky; and Mrs. A. Blenkinsop, of the Ship Hotel, for selling adulterated gin, were each fined £5.

At Mildenhall, W. Pickup, of the Queen's Arms, Mildenhall, was summoned under the Food and Drugs Act, for selling whisky not of the substance and quality demanded, being, according to the Public Analyst's report, 28.24 under proof. Supt. Heigham stated that on the 25th September he, as inspector under the Food and Drugs Act, went to the Queen's Arms and asked for a pint of whisky, with which he was served by Mrs. Baines, the defendant's daughter. Witness then told her it was for analysis, and divided the whisky in the usual way. He produced the Public Analyst's report, which was to the effect stated. In reply to the Chairman, witness said this was one of several samples purchased by him, and he had no reason to suspect defendant had been selling whisky of an inferior quality. Defendant's daughter made a statement as to the way in which the whisky received from the brewers had been broken down. Mr. Lake was present on behalf of Greene, King and Sons, Ltd., the owners of the house, and stated that if the water had been put in according to instructions the whisky would not have been so low as the legal standard, 25 degrees under proof. The Chairman remarked that evidently more water than necessary had been added. The Bench could not overlook the offence, and a fine of 10s., including costs, was imposed and paid.

At Chorley, John Sutton, landlord of the Navigation Inn, Whittle-le-Woods, was summoned for selling adulterated whisky. The sample was 7 per cent. below

the statutory limit. Mr. Carter, in defence, said Sutton, who had not held the license long, had had an hydrometer given him by an Excise Officer which he used up to the date of the offence. The hydrometer had since been tested, and was found to be just 7 per cent. wrong. The offence was not wilful. The Bench were satisfied with the explanation and let the defendant off with costs.—Alice Barton, of the Duke of York Inn, Whittle-le-Woods, was summoned for a similar offence, the sample of whisky taken from her house having been found to be 11 per cent. below the statutory limits. Mr. Kevill, in defence, said Mrs. Barton had been unwell for some time, and the person who had been looking after the place did not understand spirits properly. Defendant had kept the house for 23 years without previous trouble, and in this instance there was no guilty intention. The Chairman said someone capable should have been got to look after the house. A fine of £1 and costs would be inflicted. P.S. Jackson obtained the samples in both cases.

MARGARINE AS BUTTER.

At Leigh, on October 9th, Richard Walsh, grocer, Lord Street, Leigh, was fined £5 and heavy costs, including three guineas advocate's fee, for breaches of the Margarine and Food and Drugs Act. Inspector Parkinson was served with alleged butter, which contained 60 per cent. of foreign fats. The mixture was served in an unlabelled paper. It was stated that after this year the Royal Lancashire Agricultural Society will cease to conduct such prosecutions.

At Belfast, on October 9th, Margaret O'Neill, of 44, Rosewood Street, was summoned for selling margarine as butter and delivering it in a plain wrapper. The defence was that the substance had been purchased by the defendant from another woman as butter, and the case was adjourned four weeks to enable this woman to be brought to the court.

At Lambeth Police Court on October 12th, David Price, of East Street, Walworth, S.E., was summoned for exposing margarine for sale by retail without having the same properly labelled. Defendant said he would admit that he committed a technical offence. The tickets from the two adjoining tubs overlapped the tub from which the Inspector was served, and he told the inspector he was being served with margarine. Mr. Horace Smith ordered the defendant to pay a fine of 10s. and costs.—Thomas Hawkes, Albany Road, Camberwell, S.E., appeared to an adjourned summons for selling butter, not of the nature, substance and quality of the article demanded. Mr. Marsden prosecuted and Mr. Armstrong defended. The case was before the Court some weeks ago, when evidence was given showing that a sample of butter purchased at the defendant's shop was certified by the public analyst to contain 67 per cent. of margarine. At the original hearing of the summons the defendant produced a certificate from an analyst showing that the portion of the sample which had been left with him was absolutely pure butter. Thereupon it was determined to submit the third portion to Somerset House, and the Government analyst reported that the sample consisted of pure butter. Mr. Marsden said Dr. Teed, the public analyst, had since made a further analysis, in company with a distinguished analyst, of a portion of the sample which still remained in his possession, with this curious result, that whilst one portion of the article was pure butter, the other portion contained 67 per cent. of margarine. He (Mr. Marsden) agreed that the summons must fail as against the defendant, but under the circumstances he asked the Court not to give costs. Mr. Armstrong remarked that was the usual modest request of the vestry when they were beaten. When they succeeded they always asked for the heaviest costs they could get. Mr. Horace Smith dismissed the summons, and ordered the vestry to pay the defendant, £2 2s. costs.

At Peterhead, Alexander Pressly, grocer, 63, Saltoun Place, Fraserburgh, was charged with having on August 14th, in his shop, 20½, High Street, by the hands of William Hutcheon, then an assistant in the shop, sold to Inspector Napier salt butter which was not of the nature, substance and quality demanded, containing at least 90 per cent. of fat other than butter fat. He pleaded guilty. Mr. Anderson explained that it was owing to the extraordinary stupidity of the assistant in supplying margarine and not salt butter that the mistake occurred. After being supplied with the article the police twice asked the assistant if it was salt butter, and he replied that it was. This was the first prosecution of the kind in the district, and he hoped that because of this circumstance accused would be leniently dealt with. Sheriff Crawford said that tradesmen ought to know that it was their bounden duty as honest men to see that the articles they sold were pure, and not things worth half the price of that actually asked for. He fined accused £1.

JOSEPH PROUDLEY, grocer, East Street, Poole, was charged at Poole with selling adulterated butter, an offence which he admitted. Mr. Dickenson, who prosecuted, stated that the report of the county analyst showed that what defendant had been selling as butter was margarine, and mixed with less than 10 per cent. of butter. How long this sort of thing had been going on in Poole was not known, but it was found that margarine had been sold very largely in Poole as butter, and it was time the practice was stopped. Defendant said at the time of the sale he was absent from his shop, and his daughter made a mistake in selling the margarine as butter. Fined £1 and 17s. 6d. costs.

DRUG ADULTERATION PROSECUTIONS.

At Bolton-by-Bowland (Yorks) Petty Sessions, on October 9th, Benjamin Dugdale, grocer, of Waddington, was summoned for selling 2 ounces of milk of sulphur adulterated with 59 per cent. of hydrated calcium sulphate. Defendant stated that it was very hard that shopkeepers should be summoned or fined. He sold the article just as he had bought it. Cross-examined by the Inspector: He had written the wholesale people, and they admitted it was a mistake on their part, and promised to pay any expense he was put to. The Inspector pointed out that time after time the magistrates at that court had advised shopkeepers to obtain warranties with their goods, but they had failed to do so. Mr. Preston Holt, J.P.: Yes; they have had plenty of warning from the Bench. The Chairman in inflicting a penalty of £2 and costs, said it was a very serious matter that drugs should be sold to the public adulterated in such a manner.—David Wright Speakman, grocer, of Waddington, was summoned for selling three ounces of sweet spirit of nitre, which was found to be deficient in nitrous ether and also contained an excess of water. The county analyst, in his certificate, showed that the sample contained only about five-sevenths of the minimum proportion (1.75 per cent.) of ethyl nitrate (the most active and characteristic constituent of sweet spirits of nitre) which is required by the "British Pharmacopœia" to be present even after the preparation has been kept for some time and the vessel containing it has occasionally been opened. The sample contained 2.23 per cent. of water in excess of the legitimate proportion. The defendant said he understood that nitre would deteriorate, and therefore could not help its going wrong. The Inspector said the prosecution did not for one moment deny that sweet spirit of nitre deteriorated; in fact, the "British Pharmacopœia" recognised it, as nitre in its normal condition should contain 2½ per cent. of ethyl nitrate, and if it came below the minimum, then its medical value would be greatly reduced. Defendant was fined £1 and costs (£1 1s. 2d.). There was also a further charge against defendant for selling four bottles of camphorated oil, which on analysis was found to be 13 per cent. deficient, and also adulterated with 5 per cent. of mineral oil, whereas it ought to have contained olive oil,

79 per cent. and camphor 21 per cent. Fined £1 and costs (£1 0s. 10d.).—David Leeming, grocer, West Bradford, was summoned for selling six bottles of camphorated oil, which on analysis was found to be 5 per cent. deficient in camphor, and adulterated with 40 per cent. of mineral oil. Fined £2 and costs (£1 1s. 2d.). There was also a further charge against defendant for selling two ounces of milk of sulphur, which on analysis was found to be adulterated with 66 per cent. of hydrated calcium sulphate. Fined £2 and costs (£1 0d. 6d.). The Defendant stated that the wholesale people had promised to pay all expenses with respect to the oil, but he would have to pay his own for the milk of sulphur, as it was old stock, and he had had it years. The Chairman told the defendant that he had no right to keep drugs in stock for years, and then sell them to the public.—Benjamin Hargreaves, grocer, Grindleton, was charged with selling camphorated oil 12 per cent. deficient in camphor, and adulterated with 88 per cent. of mineral oil. Defendant said he sold it just as he had bought it from the wholesale dealers. The Chairman said it was a most disgraceful case, and he would have to pay a penalty of £3 and costs.

SYRUP ADULTERATIONS.

At Leyland (Lancs), on October 9th, David Fowler, grocer, Clayton-le-Woods, was summoned for selling adulterated syrup. Golden syrup was asked for, but the sample was found to contain about 20 per cent. of glucose syrup. Mr. Kevill, who defended, said that for the past twelve months Mr. Fowler's average weekly sale for syrup had only been about 2 lbs., so that, even if the defendant had wished to deceive the public, it would not have been worth his while. There was, however, no wrong intention, and the offence had arisen through ignorance. There seemed to have been a degree of ignorance as regards syrup throughout the trade generally, because quite recently there had been a number of prosecutions, and in nearly all of them the magistrates had taken into consideration the probability that there had been ignorance. The Chairman said the Bench thought that defendant had had no intention to deceive the public. He would have to pay the costs.

At Chorley, Fred. Cook, 95, Market Street, was summoned for selling syrup "not of the quality demanded." The sample purchased by P.S. Jackson on September 14th, was found to contain 15 per cent. of glucose syrup. Mr. Cook produced a warranty from Messrs. Crook and Son, of Preston, from whom he bought the syrup, saying it "was bought by us and sold to you as pure syrup." If the syrup had been supplied to him as he ordered it, it would have been golden syrup, and the only thing he could possibly do was to secure a warranty from the firm with whom he was dealing. The Magistrates' Clerk said it was unfortunate for Mr. Cook that the paper he had put in was not sufficient. Messrs. Crook did not warrant the syrup themselves. The Chairman said that in many of those cases the magistrates thought it was a pity that the wholesale dealers could not be got at, for often the retailer being ignorant had to suffer for the guilty. However, there had evidently been an offence committed, and defendant would have to pay 20s. and costs. Mr. Cook said the costs would be paid by the firm which supplied him with the syrup.

COPPER IN PRESERVED PEAS.

At Brentford Police Court, on October 13th, Inspector W. Tyler, the Middlesex County Council Inspector, applied for a summons against a grocer he did not name for having sold preserved peas which, on analysis, were found to contain sulphate of copper to the extent of 1.5 grains per lb. He asked for the summons under Section 3 of the Food and Drugs Act, as being injurious to health, and pointed out that in a former prosecution the Bench had convicted where the copper was present to the extent of 1.26 grains. The presiding justice, Mr. C. J. Cross,

thought the amount in question so small that a summons need not issue. Inspector Tyler then asked for a summons under Section 6 of the Act, on the ground that the article was not of the nature and substance demanded. He observed that he asked for green peas and nothing else, but as copper was given him he did not obtain the full quality of the article. The Bench refused the application on this head also.

COFFEE.

At Lambeth Police Court, on October 11th, Alfred Cooper, of Thurlow Street, Walworth, S.E., was summoned for selling coffee not of the nature, substance and quality of the article demanded. The defendant admitted the sale of the article, but said he was not aware there was any chicory in it. The certificate of the analyst showed that the sample contained 46 per cent. of chicory. Defendant explained that he had in stock some tins which were supposed to contain coffee, and emptied them into the bin from which small quantities of coffee were served. Mr. Horace Smith told the defendant that that was no defence, and ordered him to pay a penalty of 10s. and costs.

EXCESS WATER IN BUTTER.

At Lestowe, Thomas J. Rebham was summoned for having exposed for sale butter which contained 21.91 per cent. of water. Defendant was fined £1 and costs.—A similar fine was imposed on John M'Elligott for a like offence, the percentage of water in this case being 21.41.—William Barrett was fined 10s. and costs for having sold butter containing 20.68 per cent. of water.

THE ESSEX COUNTY ON MARGARINE ADULTERATION.

THE analyst to the Essex County Council on Tuesday reports that during the past quarter a considerable improvement has been apparent in the samples of butter submitted to him, although amongst the genuine samples were several of doubtful purity. It was to be feared that foreign manufacturers were learning to make mixtures of butter and margarine containing only a small percentage of margarine, which, in consequence of the natural variation in the composition of butter fat, could not be certified as adulterated. In the other articles of groceries submitted to him no cases of adulteration were found.

USES OF CONDEMNED MEAT.

DR. SEDGWICK SAUNDERS, the Medical Officer of the City Corporation, has explained to the *London Argus* the system adopted by the authorities for the disposal of diseased meat. Few people probably are aware of the fate of the large number of carcasses condemned by the lynx-eyed meat inspectors; and when it is considered that the officers of the City Corporation have seized in a single week as many as sixty tons of this meat it will be seen that unless it is utilised the waste in the course of a year would be enormous. But there is no waste, and every carcass fetches a price, says *The Globe*. One is relieved to learn at the outset that elaborate precautions are taken to prevent a dishonest contractor from selling as food for human consumption any of this condemned flesh. Immediately after the condemnation the meat is taken into a shed and plunged into chemical baths, the action of which is to render it so unsightly that no one could possibly buy it for food. After this bath it is put into carts specially constructed for the purpose, in the bottom of which is a deodorising fluid, and with padlocked doors is carried away to the contractor's premises. The next stage is the breaking-up of the meat, performed by a machine invented by Dr. Saunders himself, and known as "Saunders's Devil." The product turned out by this machine, an exaggerated mince meat, is then put into

evaporating pans, and the temperature raised to a point at which the fat liquefies. The fat, which is a valuable commercial article, is used for the manufacture of cheap soaps, and for the production of railway and cart grease; while from the rest of the meat ammonia is obtained, which sells for £8 or £15 a ton, and is used for manuring purposes. The bones of the animals are sold for making knife handles, and articles of similar description. That this business of meat inspection is a very vital one to the community may be realised from Dr. Saunder's statement that he generally has several men on the sick list from the effects of merely "handling" diseased meat.

THE USE OF TUBERCULIN FOR LESSENING THE PREVALENCE OF TUBERCULOSIS AMONG CATTLE AND CHILDREN.

Is this a Matter for Government Interference?

By HAROLD SCURFIELD, M.D., Medical Officer of Health of Sunderland.

(Continued from Page 500.)

How is the Danger to be Avoided?—1. Firstly the milk may be boiled, pasteurized, or sterilized. Many people do not like the flavour of boiled milk, although I think in most cases the taste can be acquired. Of course, to give complete security the milk from which butter and cheese are made should be pasteurized as well as the rest of the milk. There can be no doubt that a number of other diseases as well as tuberculosis of the bowels, more especially infantile diarrhoea, would show a great decline if the boiling of milk before use became a universal custom; but there seems to be little likelihood that the British public as a whole will, for a very long time to come, take to boiling their milk. The very people who from their surroundings are most liable to tuberculosis would be those who would, from carelessness or ignorance, omit this precaution. Besides, no one nowadays seriously suggests that a community should go on drinking polluted water because it can be rendered innocuous by boiling or by passing it through a Pasteur-Chamberland filter; so why should one advocate drinking milk containing disease germs because it can be rendered harmless by boiling? At the best it is a poor policy to recommend the boiling of the milk and to make no effort to extirpate the disease in the cows.

2. The danger may be lessened by frequent inspection of the dairy cows by veterinary surgeons.

The Copenhagen Milk Company employ veterinary surgeons to inspect their cows every fortnight.

Tuberculosis of the udder comes on so insidiously that a cow may give milk containing tubercle bacilli for several weeks before the disease is detected, even with fortnightly inspections. Tuberculosis, even when generalised, often has so little effect on the condition and nutrition of the cow, that it is quite possible for a cow to have general tuberculosis and tuberculosis of the udder before a veterinary surgeon, by ordinary methods of examination, can say for certain that it has tuberculosis at all.

Fortnightly inspection of all dairy cows by veterinary surgeons may, I think, be dismissed as impracticable of general application on account of the expense, and as being only a makeshift precaution, even if it were practicable.

3. Thirdly we come to the tuberculin test.

It seems not improbable that the name of Koch will go down to posterity, not, as was at one time thought, as the discoverer of a cure for tuberculosis, but still as one of the greatest benefactors of humanity by his having provided in tuberculin a means for the eradication of bovine tuberculosis, and in consequence a means for the prevention of one of the most fatal forms of human tuberculosis.

The leading veterinary authorities of Denmark, a country which depends more upon agriculture for its prosperity than any other country in Europe, have now for many years recognised the value of the tuberculin test, and the Danish Government has for several years provided farmers with the tuberculin test free of charge, on condition that they isolate the sound from the reacting animals. The veterinary authorities of France, Germany, Russia, Norway, America, and other countries have endorsed the value of the test. More recently our own Royal Commission has reported that they "consider the tuberculin test practically infallible, provided the test is applied by a competent surgeon, and that the tuberculin is of a trustworthy quality."

The Royal Agricultural Society of England has recently issued a pamphlet commending the use of the test to farmers.

It seems a pity that the scope of inquiry for the Royal Commissions on Tuberculosis was not made wide enough in the first instance. The first Commission inquired into the extent of the danger from milk and meat. The second Commission inquired into the best means of averting the danger from a human point of view. It almost seems as if there would have to be yet a third Commission for the purpose of determining upon a scheme for the eradication of bovine tuberculosis, and for convincing the present President of the Board of Agriculture that the tuberculin test is a reliable diagnostic of the presence of tuberculosis in cattle.

Schemes for the extirpation of bovine tuberculosis by the use of the tuberculin test depend upon a few established facts:

(a) The tuberculin test is a wonderfully reliable diagnostic of the presence of tuberculosis in cattle long before disease has become infectious.

(b) No animal can develop tuberculosis unless the tubercle bacillus finds an entrance into its body.

A sound animal will remain sound unless it is exposed to infection, and a sound herd will remain sound unless an affected animal is introduced among them.

(c) The tubercle bacillus is not ubiquitous, but is only found in the diseased parts and the discharges from the diseased parts of affected animals. The bacillus only lives a few weeks after its expulsion from the body, and is quickly killed by sunlight, fresh air, and disinfectants.

The expression "the ubiquitous tubercle bacillus" is as unfortunate as it is untrue. Even in countries where the disease is very prevalent, it is not uncommon to find herds entirely free from the disease. Thus, Bang states that, out of 5,306 herds examined in Denmark, 1,132 were entirely free from the disease, and some of these sound herds were composed of very heavy milkers.

(d) It is extremely difficult for the bacillus to pass from mother to calf before birth, and the calf of a tuberculous cow is, with very rare exceptions, born free from tuberculosis; and if such a calf be separated from its mother directly after birth, it will remain free unless exposed to infection.

As Nocard says, "The offspring is born tuberculizable, not tuberculous." One animal is, perhaps, more likely to resist infection than another, but it is not by any means proved that the calf of a tuberculosis cow inherits any special predisposition to the disease.

Bang, who has probably done more work than anybody else in the solution of this problem, says: "Concerning the mysterious predisposition which is so often spoken of, I will not deny the possibility of its existence, but up to the present we know nothing for certain about it."

What I wish to bring before your notice to-day is, firstly, what can be done while the Government is making up its mind, and, secondly, some suggestions as to what the Government might make up its mind to do.

A demand is gradually springing up in the country for milk from tubercle-free herds. The dairy-farmer can answer this demand by only keeping and only buying animals which are certified to be free from tuberculosis by a veterinary surgeon's examination, which is to include the application of the tuberculin test. He may elect to have his whole herd tested, and get rid of the reacting animals quickly, which will be a costly process; but as most dairy-farmers only keep their cows for one milking, he will probably elect to obtain a tubercle-free herd in about a year by the more gradual process of only buying tested animals. He may be able to buy such animals from a breeder, but more probably he will buy from a dealer on condition that the animal, if it fails to pass the test, will be returned. Whichever way he buys, each cow will probably cost him £3 or £4 more than cows bought in the ordinary way. He will also have to provide separate byre accommodation for the sound and for the reacting or untested animals. He may be able to accomplish this by temporary partitions. He will, at any rate, have to thoroughly disinfect and cleanse the byre, or division of the byre, into which the sound animals are put.

During the process of acquiring a tubercle-free herd, there is no equitable reason why he should not sell the milk of the whole of the cows as before. The cows are none the worse for the application of the tuberculin test, and the milk of the herd mixed is no more dangerous because the dairy farmer happens to know which cows are tuberculous and which are not than it was when he was in a state of blissful ignorance. In fact, the public will have greater security, because the dairy-farmer will naturally be on the look-out for the development of udder disease in the cows belonging to the reacting part of the herd during the period that elapses between the testing and their departure from the farm. If he adopts the gradual process of acquiring a tubercle-free herd by only buying tested animals, there is also no reason why he should not use the milk of the untested animals until their departure from the farm.

If the breeder goes in for the system, he will have the whole of his stock tested, and place the sound and reacting animals in separate byres. He will remove the calves of the reacting cows to the sound section immediately after birth, and have them tested when they are a few weeks old. He will boil the milk of the reacting cows before using it, and will get rid of all the reacting animals as soon as he conveniently can.

How is the Dairy-farmer to be repaid for his Outlay?—

1. In the first place, the dairy-farmers who take up the matter first will undoubtedly secure increased custom.

2. In the second place, the dairy-farmer will be able to get 2d. a pint for his milk from his private customers. Many dairy-farmers in this district supply milk to private customers at 1½d. a pint. If it pays to supply milk under ordinary circumstances in small quantities at 1½d. a pint, it will certainly pay better to keep only tubercle-free cows and supply milk at 2d. a pint. I know that some customers in my own district are now paying 2d. a pint for milk from tested cows, who formerly paid 1½d. a pint for milk supplied under ordinary conditions.

3. In the third place, wholesale customers will pay more for milk from tubercle-free herds, notably hospitals and schools. The Infectious Diseases Hospital at Sunderland pays 1½d. per gallon more than formerly, the Sunderland Infirmary about 2d. more per gallon. The Monkwearmouth and Southwick Hospital, the Co-operative Society, and many schools in the district, are also paying increased prices for such milk.

4. In the fourth place, the dairy-farmer will be saved from further losses from tuberculosis, and will get a better price for his cows from the butcher, owing to their being free from tuberculosis.

To sum up, the dairy-farmer who goes in for the system at present will have to pay about one-sixth more for his cows, but to balance that he will have

increased custom, a somewhat better price for his milk, no further losses from tuberculosis, and a better price for his cows when sold to the butcher.

If the dairy-farmers go in for the system, the breeders will soon find that it is worth while to follow suit, because they will be able to get £2 or £3 extra for every tubercle-free animal they sell. I am glad to learn that some of the breeders in Wensleydale are going in for the test, as the result of the action of the dairy-farmers in the Sunderland district.

I believe that sanitary authorities, by giving certificates to dairy-farmers who keep only tubercle-free cattle, and by advising hospitals, schools, institutions, and the general public of the danger of tuberculous milk, can greatly encourage the movement, and that if this were done more generally, the increase in the number of dairy-farmers and breeders keeping only tubercle-free cattle would soon have an appreciable effect in reducing the proportion of tuberculous cattle in the country.

Every additional tubercle-free herd means an addition to the number of cows that are being protected from infection, and ultimately a diminution in the prevalence of bovine tuberculosis as a whole.

I believe that the extended application of the voluntary system will, by drawing attention to its advantages and drawbacks, hasten legislation on the subject.

Drawbacks to the Voluntary System.—(a) Firstly, there is the difficulty in buying. If the dairy-farmer cannot buy tubercle-free animals from the breeder, he has to buy conditionally from a dealer, keep the animal a week, have it tested, and return it to the dealer if it fails to pass, making some payment to the dealer as a compensation. This returned reacting animal goes to the market again, and is sold to a farmer who is not buying tubercle-free animals. As probably about half of the second farmer's stock will be tuberculous, this does not perhaps matter very much, but it would be preferable if "reacters" went to the butcher.

(b) A more serious objection is that sometimes a tuberculous animal, if it is tested twice, with only a short interval between the tests, will react the first time and not the second. This fact leaves a loophole for fraud, and it would be exceedingly hard on a progressive farmer, who had gone to the expense of securing a tubercle-free herd, to have palmed off on him as sound a tuberculous animal which had simply failed to give a reaction at the second test. This failure to react at the second test is not the usual thing, but is common enough to constitute a danger. Recently one of the Sunderland veterinary surgeons tested four cows twice in a fortnight. Three out of the four reacted to the second test.

In another case a cow was taken on trial by a Sunderland farmer, and tested on December 3rd. It gave a reaction, and was returned to the dealer. This cow then went to Chester-le-Street, Sunderland, Haswell, Stockton, Gateshead, and finally back to Sunderland, where it was sold to another Sunderland farmer. It was again tested on December 21st, and gave a more pronounced reaction than it did the first time.

(c) In the third place, the extension of the voluntary system will be in proportion to the demand, and as it is quite certain that the great mass of the British public do not take much interest in the sources of their milk-supply, the demand will be a very limited one. That section of the community whose circumstances and surroundings render them most vulnerable to the attacks of the tubercle bacillus will be the section least likely to be supplied with tubercle-free milk.

It appears to me that as the law stands at present the voluntary use of the tuberculin test is deserving of every encouragement, but that, as the voluntary system is only capable of very limited extension, and on account of the objections to it that have been mentioned, it is necessary that the Government should come to the rescue.

I now pass on to what the Government might do, or rather to what, with all humility, I think the Government ought to do.

I would suggest that the Government should enact :

1. That injections of tuberculin be only made by duly qualified veterinary surgeons.

2. That every veterinary surgeon who employs the tuberculin test be bound under a penalty to brand every animal which reacts.

3. That the tuberculin and the services of a veterinary surgeon to perform the test be offered free of charge to any farmer or breeder who will agree to isolate the sound from the reacting animals, and that compensation be paid for any of the branded reacting animals, which, on being slaughtered within a reasonable time—say one year—is found to be unfit for food.

4. That the sale of branded animals, except for slaughter, be prohibited.

5. That any obviously tuberculous animals found among the stock on the arrival of the veterinary surgeon to perform the testing, be slaughtered without compensation, except in case of failure of diagnosis.

6. That any butcher buying a branded animal be obliged to apply to the meat inspector of his district for the purpose of ascertaining whether the carcase is fit for food, and what organs require to be destroyed. Condemnation to be meted out on the lines laid down by the last Royal Commission.

The duties of meat inspector would naturally fall to the veterinary surgeon appointed for the purpose of the Contagious Diseases (Animals) Acts.

7. That the milk of the branded cows be not sold for human consumption unless an arrangement is made for their periodical inspection by a veterinary surgeon, to ascertain that the udders are free from disease.

8. That local authorities be empowered to compel the slaughter of cows suffering from tuberculous disease of the udder, or advanced tuberculosis, compensation only to be paid in the case of wrong diagnosis and animals branded under enactment 2.

9. That the local veterinary surgeons carrying out the provisions of the Contagious Diseases (Animals) Acts be appointed to carry out these enactments.

Part of the extra salaries required could be obtained by doing away with the travelling inspectors of the Board of Agriculture, who, without any technical training, go about the country in case of swine fever outbreaks, etc., to perform work which could be much more efficiently and promptly done by local veterinary surgeons. The local veterinary surgeons would thus be practically veterinary medical officers of health. In France there is, I believe, such a veterinary health officer in each district.

10. That after the lapse of, say, five years from those enactments becoming law, (a) no compensation for condemned carcasses be given; (b) the sale of milk from any tuberculous cow be forbidden, and local authorities be empowered to use the tuberculin test, any animal reacting to the test to be isolated and fattened for the butcher as quickly as possible without compensation; and (c) all cattle be sold with an implied warranty that they are free from tuberculosis.

How would such a scheme affect the farmer? He would get rid of his losses from tuberculosis, and his expenses would be the provision of separate byre accommodation for the sound and reacting animals, and the fees of the veterinary surgeon for the periodical inspection of the branded cows, if he wished to continue selling their milk.

The calves of the branded cows would be removed to the sound section immediately after birth, and would remain there unless they showed a reaction when tested a few weeks after birth.

He would have a ready sale for the branded animals,

because the butcher would run no risk of loss in buying them.

He would risk considerable loss if he did not go in for the system before the close of the compensation period, so that this apparently voluntary use of the tuberculin test would be practically compulsory.

As the breeder under this scheme would be able to rear tubercle-free animals without much expense, the dairy-farmer would only have to pay a very slightly increased price for his newly-purchased tubercle-free animals.

How would the scheme affect the butcher? The butchers would be able to buy branded animals without fear of loss, and would soon learn that most branded animals had only a slight amount of disease about them and were fit for food.

The butchers would also soon learn that their risk lay in buying unbranded animals, and they would probably combine to throw the loss from a condemned carcase on the seller, and thus bring pressure on farmers and breeders to go in for the testing scheme. The butchers in the Isle of Man at present combine so as to throw the loss from condemned carcasses on the seller.

How would the scheme affect the community? The risk from tuberculous milk and meat would in a few years be probably almost abolished. The cost of accomplishing this would chiefly fall on the community, but there is very much more reason for throwing the cost of extinguishing bovine tuberculosis on the community than there is for similar action in the case of swine fever and pleuropneumonia, diseases which cause no danger to human life. The estimates that have been made show that the cost in compensation would not be very great, as only a small percentage of the reacting animals would be found to be unfit for use as meat. On the subject of compensation the minority report of the last Royal Commission seems to me eminently fair.

The report says :

"It has been shown to our satisfaction that it is impossible to detect the presence of limited or localised tuberculosis in the living animal from its outward appearance. Even when generalised—that is, when it exists to an extent which may justify the condemnation of the carcase after slaughter—the animal may betray no signs of the disease."

And again :

"Scientific knowledge of the character of the disease is so recent that the ordinary agriculturist cannot be blamed for its prevalence in his stock. It seems, therefore, equitable to protect him against being made the scapegoat of the general ignorance which prevailed till recent years. But as soon as the proper treatment and precautions have been formulated, it will become his duty as well as his interest to put himself beyond risk of loss by confiscation."

In the scheme which I have endeavoured to sketch out, compensation would only be given in cases where an organised effort was being made to extirpate the disease. Compensation under any other circumstances would not be justifiable. The scheme would not throw much expenditure on the farmer, would entail no loss for the butcher, and would not prove very costly for the community.

A FISH SCARE.

As article of food the flesh of fish is particularly nutritive, though less satisfying and, perhaps, less stimulating, than ordinary kinds of meat. This has been recognised, and fish is frequently recommended as a useful food for invalids on account of the ease with which it is digested. But, of course, those persons who tell us that all food is dangerous, and who apparently think that the scientific method of living would be to exist on air, must have a throw at fish. That innocent inhabitant of the

deep is accused of containing iodine, and of course iodine is not wholesome, says the *Western Morning News*. It seems that the herring is the greatest offender, containing two milligrammes of iodine per kilogramme. Next comes the mussel with 1.9 milligrammes; then the salmon with 1.4 and the ling and cod with 1.2 milligrammes. The salmon trout appears to contain the smallest quantity, which is only 0.1 milligramme per kilo. Are these insinuations against the character of fish to go unchallenged?

UNSATISFACTORY FINES AT BELFAST.

THE Public Health Committee decided yesterday to bring under the notice of the magistrates the fact that the light fines imposed for the adulteration of food have not had a deterrent effect. One of the persons fined last week has been again detected this week selling adulterated milk. Alderman Graham expressed the opinion that the smallness of the fines was a premium upon adulteration, as dishonest traders could well afford to pay trifling fines out of the large profits they make. We hope that attention has only to be directed to this unsatisfactory state of affairs, says the *Belfast Evening Telegraph*.

ALLEGED FATAL POISONING BY NEW ZEALAND CHEESE.

AN inquiry took place at Aldershot, on October 11th, touching the death of John Leslie, a private of the Black Watch, which was supposed to be due to poisoning. Four soldiers died with similar symptoms in the Cambridge Hospital. The case was watched on behalf of the New Zealand Government by Mr. H. C. Cameron, New Zealand Inspector of Produce; by Mr. Maton, solicitor, and by Dr. Rideal, analyst, on behalf of London merchants; whilst Mr. W. E. Foster represented Sir Richard Dickeson and Lipton (Limited). Alexander Duncan, a corporal in the Black Watch, said that on the morning of September 5th, when Leslie was taken ill, he had no fish or cheese for breakfast, or during the day as a ration. It was probable that he could have purchased them elsewhere. In cross-examination, witness stated that he could not say who the contractor was: he believed that Lipton (Limited) supplied the grocery bar and canteen of his regiment. There were in all some twenty-six men out of his battalion admitted to the hospital suffering from some disease. Captain Healey, Royal Army Hospital Corps, on being called, produced the result of the analysis, which showed that a complete analysis of the viscera and the contents of the stomach of the deceased soldier Rowe had been made. They were quite free from metallic and vegetable poisons, but in the contents of the stomach a quantity of toxic ptomaines was present in too small a quantity to identify. In the portions of cheese handed to the analyst he found tyro-toxicon present in fairly large quantity. One milligramme of this tyro-toxicon injected into a rat killed it in three hours. The symptoms from which the soldiers suffered were quite compatible with the cases being due to tyro-toxicon poisoning. Captain Healey added that the cause of Leslie's death was gastro-intestinal inflammation, but his symptoms were generally the same as shown by Rowe. Deceased did not say before he died whether he had eaten any cheese. He had never attributed his death to anything he had eaten. There were still soldiers in hospital suffering from similar causes. He himself saw no symptoms of ptomaine poisoning, and he had certainly never heard of a case of tyro-toxicon poisoning in England. Mr. Foster said he could show that there had been twelve tons of cheese sent by the New Zealand Government, and he could prove that there was no other complaint. Objection was taken to the name of the Government being used, as there was no evidence to lead up to it, and in this objection the coroner acquiesced. Captain Hughes, analyst, etc., of the Royal Army Hospital Corps, Cambridge Hospital, gave evidence at great

length, and said that he had never heard of a case of tyro-toxicon poisoning having occurred in this country. He thought this was the first of its kind in England, and he had taken notes upon it. A number of men who had been affected on the manoeuvres had been treated in hospital. They were encamped at Cowshott, and, after the troops had moved, a number of sheep had died on the hills. Witness had exhumed the bodies of the sheep, and had had a post mortem, with the result that quantities of cheese were found in the bodies. That cheese had been found to be infected with tyro-toxicon, and he held that the poison was present when the sheep ate the cheese. He should say that tyro-toxicon was present in that cheese during its manufacture. The case bristled with difficulties. The Coroner, in summing up, pointed out that no doubt the death of the man Leslie was due to gastro-intestinal inflammation, and that it corresponded with the symptoms of the other soldiers who had died. But he did not think that the jury would be wise in saying that it was due directly to the cheese. The jury conferred together for a considerable time, and then returned an open verdict that death was due to the inflammation of the stomach, but they had absolutely no evidence to show how the inflammation had been set up. It might or might not have been due to tyro-toxicon poisoning.

Mr. H. C. Cameron, Produce Commissioner for the New Zealand Government, Westminster Chambers, 13, Victoria Street, in a letter dated October 12th, writes:—"I beg to inform you that the statement to the effect that certain cheese to which reference was made at the inquest held at Aldershot yesterday was supplied by the New Zealand Government is entirely incorrect. The New Zealand Government have not at any time supplied cheese to Aldershot or anywhere else in the United Kingdom."

THE PRESERVATIVES IN FOOD ENQUIRY.

THE West Riding County Council met on October 11th when the Sanitary Committee having been appointed by the President of the Local Government Board to inquire into the use of preservatives and colouring matter in food, and having requested the county medical officer to give evidence in that connection, the committee had authorised him to do so, and to institute, in conjunction with the public analyst (Mr. A. H. Allen), such chemical and other investigations as would illustrate the extent to which foods are so treated in the West Riding.

DECLINE OF DANISH BACON TRADE IN ENGLAND.

At the meeting of delegates from the agricultural societies of Jutland, held at Aarhus, the position of Danish bacon on the English market was discussed. With reference to the fall in prices during August, the cause had been looked for in the many small pigs, but it was urged that the bacon factories themselves could prevent their members from bringing them. The fall in prices was not always due to excessive imports, which was proved by figures, and was a regular thing in August. It was difficult to understand the complaints about the Danish pigs, as the Danish bacon had never been better than this year, and at the factories every attention was paid to the complaints—few and far between as they were—which were received from England. The present method of selling Danish bacon in England was not a good one; there were too many intermediaries between the factories and the consumers. It was also pointed out that, however well the bacon was handled on board Danish railways and steamers, it often suffered much through careless treatment on its arrival in England. We are inclined to think the real reason is the rapid improvement in English and Irish bacon, which we hope to see grow until Denmark does not sell an ounce to us,

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Food and Sanitation.

SATURDAY, OCTOBER 28, 1899.

THE IRISH BOARD OF AGRICULTURE. IS IT TO BE A USEFUL BODY.

It is stated that the position of Vice-President of the New Department of Agricultural and Technical Education in Ireland is to be offered to Mr. Horace Plunkett, M.P. The excellent work which Mr. Plunkett has done in connection with Irish agriculture is known, and if,

ability, zeal for Ireland's industrial development, and hard work entitles a man to the post, the Hon. Horace Plunkett has earned it a hundred times over. But the qualities the Hon. Horace Plunkett possesses are not those which have ever won recognition in Ireland,—where it would be hard to find an appointment honestly made. The highest judicial honours are bestowed on inciters to murder, like the late Judge Keogh or unprincipled legal hirelings and jury packers. Arrayed against this class and the "Hungry Hamilton's" are the alleged nationalists of the various factions from whom it cannot be honestly said save in two instances (*i.e.*, Mr. W. Field and Count Moore) that the development of Irish industries has ever had any help whatever. Intelligent and earnest efforts to improve Ireland's butter trade by the establishment of Co-operative creameries, to secure the better handling and humane treatment of cattle in transit, and thus increase their sale value, to encourage the production of better bacon for the English market, and thus put money in the pockets of the Irish people and advance Ireland's trade—all these have had the practical hostility of the Idols of the Irish, who dub themselves Parnellites, Healyites, Dillonites, etc.

Years ago we endeavoured to secure the co-operation of these leaders of Irish opinion for a non-partisan movement to develop Ireland's industrial resources, but not a "patriot" would stir a step save Mr. Plunkett, and when he took up the work the patriots alleged it was a sinister move to advance the Conservative cause in Ireland and damage "Home Rule prospects by making Ireland prosperous." Illustrations of what Denmark was doing, and how the Danes and French were gaining practical control of the butter trade fell upon hostile or ignorant ears, and Ireland's trade could and did wither rather than the vanity or ambition of Mr. Tim Healy and other shining Irish lights should suffer and the flow of money from America cease. For years Mr. Plunkett and Mr. Field were alone amongst Irish members of parliament in working to improve Ireland's trade. Possessing the finest cattle and pastures in the world Ireland should easily drive Denmark and Brittany from the position these countries have gained in England's markets during the past twenty years. If the Hon. Horace Plunkett be the head of the new Irish Board of Agriculture and Mr. William Field were associated with him the new Board would be a boon to Ireland and soon realise for that unfortunate country Sydney Smith's good wish "Erin go bread and cheese" instead of "Erin go Bragh." It is a vain hope, but in Ireland's interests we should like to see on the new Board of Agriculture Mr. Plunkett, Mr. Field, and Count Moore. What we fear we shall see will be some hirelings of the Duke of Abercorn's parasitical gang—more hungry, needy, incapable Hamilton's—pitchforked into positions for which they possess no fitness whatever.

Ireland has able scientific agriculturists and skilled chemists. The names of Professor Carroll, Sir Chas. A. Cameron, Professor Hodges, Professor Tichborne, and D. J. O'Mahony are well and honourably known. Given the opportunities these men, with the co-operation of

clear headed Captains of Industry, of which Ireland possesses many besides Sir Thomas Lipton, Mr. T. H. Cleve, the Denney's and others, would be able to do equally as good work for Ireland as Professors Böggild, Bang, and others have done for Denmark. We hope to see the day when every ounce of Denmark's artfully adulterated butter now sold in our markets is ousted by a purer and better Irish butter, when Irish bacon, eggs, and poultry replace what we now draw so largely from France and other foreign countries, and misery, disaffection, and famine in Ireland give way to prosperity and happiness. If the Irish Board of Agriculture be properly constituted it can bring about this happy result.

DANGEROUS TINNED PINEAPPLES.

At West London on October 14th, Frederick Britten, a costermonger, was brought up on a warrant, before Mr. Rose, charged with exposing for sale a number of tins of pineapple which were unfit for the food of man. The case had been standing over for some time in consequence of the prisoner not appearing to a summons which was issued on the 1st inst., and subsequently a warrant was granted for his arrest. In August last Inspector Floyd, of the Fulham Vestry, saw the prisoner with a barrow in North-end Road with a large number of tins of pineapple exposed for sale. He noticed that many had a suspicious appearance, the tins being blown out at each end with air. The tins were seized, and it was found on being examined that the contents were quite unfit for food, the magistrate before whom they were brought condemning 140, which were destroyed. The police had been put to great trouble in finding the prisoner, but on Friday the officer was successful in arresting him near Guildhall, where he had been summoned for an obstruction.—The prisoner, who did not offer any excuse, was fined 10s., with 5s. costs.

ADULTERATED WHISKY.

At Camelford, William Edward Spreadbury, proprietor of the Western Inn, Camelford, was charged, under the Food and Drugs Act, with unlawfully selling whisky 28 degrees under proof—3 degrees below the required standard.—Superintendent Nicholls stated that on the 23rd of August, in company with Inspector Smallcombe, he visited defendant's inn, and purchased from him a pint and a half of Scotch whisky. He divided it into three parts, one of which he forwarded to the public analyst, a second he handed to the publican, and the third he retained. He produced the result of the analysis by Mr. Benedict Kitto, which stated that the whisky had been brought down to 28 and a fraction of degrees under proof. They were allowed to dilute it to the extent of 25 degrees. Mr. Spreadbury pointed out that he had stocked the spirit a sufficient length of time for the deviation complained of to take place. He thought the action a very frivolous one. Fined 10s. and costs, and ordered to pay the analyst's fee of 10s. 6d., amounting in all to £1 9s.

WILLIAM FEARN, landlord of the Foresters' Arms, Wood Lane, Yoxall, was summoned on October 17th, at the instance of Mr. H. Van Tromp, county inspector, under the Food and Drugs Act, with selling whisky diluted with water to the extent of 16 per cent. beyond the statutory limit. Samuel Toy, an assistant inspector, said that on the 8th of September he visited defendant's house at Yoxall. He saw a jar in the bar labelled whisky, which was sold to the public. He bought half-a-pint, paying 1s. 3d. for it. He explained the reason of his buying it, saying that it would be analysed by the county inspector. Mr. Van Tromp gave corroborative evidence as to seeing the sale effected, and to receiving the sample. Defendant stated that he had been in business twenty years, and had

never heard a complaint about his whisky before. This particular whisky was bought from a fresh source. Previously he had bought whisky at proof and reduced it seventeen degrees. In this case the vendor had himself reduced the whisky, but that was unknown to the landlord, and the usual amount of water was added. The Bench said that they did not consider the case a serious one, but they were obliged to inflict a small fine. Defendant was fined 10s., with £1 15s. 6d. costs. Defendant expressed his obligation to the Bench.

At Scunthorpe, on October 18th, R. J. Swaby, of the Blue Bell Hotel, Scunthorpe, was summoned by Superintendent Marshall for selling whisky below proof. Samples were taken by the police, which, on analysis, showed 70·8 per cent. proof spirit and 29·2 per cent. water. Mr. Sowter, who appeared for defendant, pleaded guilty to a technical offence, and a fine of £5 and 15s. costs was imposed.

MILK.

At Southampton, Robert Clay Coates, was summoned by Mr. Robinson, inspector under the Food and Drugs Act, for selling milk to which water had been added, at Eastleigh, on Sunday, the 27th August. Mr. Robinson gave evidence as to the purchase of the milk, and said that he received a certificate from the county analyst, Mr. A. Angell, to the effect that it contained 25 per cent. of added water. Mr. C. Lamport appeared for the defendant, and raised the substantial objection that he should not have been summoned, as it was public knowledge that for some time he had had the misfortune to be in the Bankruptcy Court. Defendant was in a large way of business, with branches in several places, and a proposition was made to his creditors, which was almost accepted, but one or two would not accede to it, and the business was vested in trustees, and had since been sold, and defendant was simply a paid manager. The milk was sold as purchased, and to show the defendant's desire to comply with the Act he had had other samples analysed, and all showed adulteration, and he had asked the inspector to assist him by having samples taken. He had never had a warranty, as it was difficult to get one. Mr. Robinson said the milk was bought from a boy in charge of a milk car, belonging to the "Express Dairy," in Leigh Road. Under the circumstances the information was dismissed.

CHARLES SAUNDERS was summoned for selling new milk to which water had been added, on the 27th August, at Eastleigh. Mr. Robinson stated that he authorised the purchase of milk from the defendant, and divided it into three parts, one of which he left, and two he brought away. One of the samples was forwarded to the County Analyst, who had sent a certificate saying that it contained 30 per cent. of added water. The milk was supplied by the defendant's daughter, and the defendant kept a dairy. Mr. C. Lamport, for the defence, stated that the defendant had been selling milk at Eastleigh for eight years, and had a written warranty from a farmer who supplied it. On the day the sample was taken, his supply ran short, and defendant purchased a small quantity from the Company mentioned in the last case. Evidence as to this was given by the defendant and an employe of the "Express Dairy." The Bench imposed a fine of £1, and costs £1 3s. 6d.

JAMES PARFITT, was summoned for selling milk at Eastleigh, on the 27th August, from which fat had been extracted, so as to effect injuriously its substance, quality and nature, without that fact having been communicated to the purchaser. Mr. Robinson stated that he caused a quantity of milk to be purchased at the premises of the defendant, a dairyman at Eastleigh. He sent a sample to the County Analyst, who forwarded a certificate that fat had been abstracted to the extent of 14 per cent. Mr. Lamport, for the defence, stated that the answer to the summons was that defendant did not know of any cream having been extracted, and could not therefore say any had been extracted. He suggested that the absence of

the cream was due to the poverty of the milk, as defendant sold it just as he received it straight from the cow. Defendant gave evidence as to selling the milk just as he received it, and Daniel Emmett, formen at the farm from whence the milk was supplied, stated that it was sent straight from the cow. The Chairman stated that the owner of a business must make quite sure that he was selling a pure article or take the responsibility, and defendant would have to pay a fine of £2, and costs £1 3s. 6d.

At Lymington, Martha Harrison, of South Street, was summoned for selling new milk adulterated with water. Defendant stated that she sold the milk as purchased by her, but admitted not having a warranty with it. Mr. Edward Robinson, an inspector under the Food and Drugs Acts, stated that on the 2nd inst., he purchased some new milk of defendant. He had since had it analysed by the County Analyst, who certified it contained 18 per cent. of added water. Fined 6d. and costs, 19s. 6d. William Lewington, of Waterford, for a similar offence, was fined 6d. and costs. This milk contained nine per cent. of added water. Defendant pleaded he sold it as purchased.

At Norwich Guildhall, Edward Chamberlain, shop-keeper, of Grove Road, was summoned at the instance of Joseph Brooks, Inspector under the Sale of Food and Drugs Acts, for selling adulterated milk on September 23rd. The Town Clerk prosecuted, and stated the milk purchased by the inspector when analysed contained 90 per cent. of milk and 10 per cent. of added water. Mr. Brooks in his evidence stated that the defendant informed him that the milk was just as it came in. The defendant, who was sworn, repeated this statement to the magistrates. Cross-examined—He did a fair business. Witness did not place the milk in the pan. He had been previously convicted. He purchased the milk from a country farmer. The magistrates after consultation, decided to impose a fine of 10s. and 15s. costs. The Chairman said surely there was a method in which milk sellers could obtain a written warranty with the milk whereby they could defend themselves.

At Leeds, on October 17th, Thomas Broughton, milk dealer, 2, Springfield Avenue, Leeds, was fined 40s. and costs at the City Police Court yesterday for selling milk adulterated with water to the extent of 15 per cent. A similar penalty was inflicted on Harrison Ledger, 19, Great Garden Street, Burmantofts, for selling milk with 17 per cent. of added water.

FREDERICK QUIGLEY, dairyman, Northern Road, Plaistow, was summoned to West Ham Police Court on October 18th, for selling milk adulterated with 17 per cent. of added water. Mr. Baggally imposed a fine of £10, and £1 1s. costs, or in default one month.

At Burton, on October 18th, Edward Abbott, of Uxbridge Street, milk seller, and George Norcott, one of his employes, were charged, at the instance of the county inspector (Mr. Van Tromp), with selling separated milk not of the quality demanded by the purchaser, the same being adulterated with 22 per cent. of added water. Mr. F. W. Richardson appeared for the defendants. Samuel Toy, assistant inspector under the Sale of Food and Drugs Act for Staffordshire, said on the Sept. 9th, he met Norcott selling milk in Derby Street. Witness bought a pennyworth, which Norcott said was fresh. Defendant was then told that it had been bought for the purpose of being analysed, and he said it was fresh separated milk. The sample was divided into three portions, one of which Mr. Van Tromp took, the others being taken by witness and defendant. Mr. Tromp, who was present at the time, gave similar evidence. The county analyst had seen the sample, and stated that it was adulterated with 32 per cent. of added water. Abbott went into the witness box. He said that he sold both fresh and fresh separated milk, which was bought from the Eggington Dairy Company. On the day in question he was ill and did not leave his

bedroom, and knew nothing of the occurrence. It was his practice after the cans had been washed out with hot water, to leave a little water in them to keep them clean. Norcott said that each morning he went to the station to fetch the milk, which was emptied from the company's cans into Mr. Abbott's cans. They generally put about a couple of gallons of water in the cans to keep them clean. On this particular morning, when he returned from his round, he found he had 10d. over the amount he usually collected, and for which he could not account. Owing to Mr. Abbott's illness he was unable to do all the duties before going out, and the only way he could account for the adulteration was that a boy employed had neglected to empty the water from the can.—The case against Abbott was dismissed, and Norcott was fined £1, with £1 17s. 6d. costs.

DANIEL BARRETT, 66, Watercourse Road, was summoned at Cork, on October 18th, for an offence under the Food and Drugs Act, by having sold milk which was deficient in fat to the extent of 15 per cent. Ellen Sullivan, Dublin Street, was summoned for a similar offence; the deficiency reaching 12 per cent., and a like charge was preferred against Timothy Harte, 5, Rockwell Terrace, the milk being deficient to a similar extent. The defendants were each fined £1 and costs.

At Dublin, on October 18th, Hugh Byrne, 1, Cambridge Terrace, Rathmines, and John Timmons, 56, Ranelagh Road were each fined £2 for having exposed for the purpose of sale milk, to which water was added to the extent of 16 per cent. in the former, and 19 per cent. in the latter case. Jane Coughlin, 32, Upper Dominick Street, was also prosecuted for selling milk from which 22 per cent. of fats, equivalent to an addition of 4 per cent. of water, had been extracted. The defendant stated that she sold the milk as she got it from Mr. Moran, Bolton Street. She never put any water into it. She had got a guarantee as to the purity of the milk from Mr. Moran. Mr. Mahony adjourned the case and advised the Corporation authorities to institute a prosecution against Mr. Moran. Either the present defendant or Mr. Moran should be fined. George Smith, 212, Phibsborough Road, was fined 10s. for selling milk to which 8.9 per cent. of water had been added. Inspector M'Kay represented the Corporation in the two latter cases.

ADULTERATED RUM.

At Ripley, on October 16th, William Green, landlord of the King William IV., Ripley, was charged by Inspector T. Sandy with selling to him on June 28th a pint of rum which was proved to contain added water. Defendant's wife admitted the offence. The analyst's certificate stated that the rum had eight parts of added water, and was 25 degrees under proof. The Bench imposed a fine of £1 and costs £1 2s.

SPIRITS : EXCISE PROSECUTION.

At Wellington on October 16th, Henry C. Smith, wine and spirit merchant, Wellington, was summoned for putting water in nine casks for the purpose of extracting the spirits absorbed in the wood. Mr. P. W. Kendrick represented the Excise authorities and Mr. J. W. Littlewood appeared for the defendant. When two Excise officers visited the defendant's premises on the 12th September, they saw nine casks each containing water, standing in the yard. The contents were mixed with spirits from the wood, and varied in strength. A fine of £10 and the costs was imposed, and the casks and their contents were ordered to be forfeited.

GOLDEN SYRUP : ALLEGED FALSE WARRANTY.

At Liverpool Police Court, on October 18th, the Glebe Sugar Refining Company, Greenock, was summoned for giving a false warranty respecting golden syrup to a

Liverpool grocer. Mr. Rudd, who defended, submitted that there was no written warranty regarding the article, but the stipendiary considered the invoice and the wrapper combined were sufficient as a warranty. He considered, however, that there being a label inside the wrapper of the tin stating that the syrup was a mixture of cane sugar and glucose syrup made the case not such a bad one, and he suggested that the case should be withdrawn on payment of costs, and this was done, Mr. Rudd undertaking, on behalf of the defendants, that the tins should not in future be sent out with that label.

COPPER IN PRESERVED PEAS.

Important Prosecution.

AT Brentford, on October 19th, Grantham & Bryant, grocers, The Parade, Haven Green, Ealing, W., were summoned under Section 3 of the Food and Drugs Act for having sold to Inspector Tyler green peas adulterated with sulphate of copper in a manner injurious to health; and also under Section 6 for having sold green peas not of the nature, substance, and quality demanded. Mr. Philip Beck (Neve & Beck) appeared to defend. The Inspector said he asked for a bottle of preserved peas, and was served with one which bore the label: "Kent Garden Peas. Finest English Marrowfat Peas; preserved in Kent.—Petty, Wood & Co., London." Having notified the purpose for which it was required, the defendants' representative stated that he sold the bottle as it was received, and that it had not been opened by him. The analyst certified as follows:—"I am of opinion it contains copper equal to 2.64 grains of copper sulphate per pound." By Mr. Beck: The defendants' firm was a good one. There was some conversation between them as to the unsatisfactory state of the law as regards peas, copper being allowed in France. Mr. Beck: You agreed with him that the law is unsatisfactory. Yes.—You have had some dealings with Petty, Wood & Co.? Yes. He added further that he had seen Messrs. Petty, Wood & Co.'s July price-lists, and he saw no reference to copper in the peas advertised therein. Other firm's lists notified that their peas contained copper. Messrs. Petty, Wood & Co. were proceeded against in September, and their October price-list now contained the intimation that their peas had copper in them, but it was not at all injurious.—Mr. Beck said that he admitted the facts, but disputed the liability. He had already argued the question of copper in peas before that Bench, who had held that 1.60 was an injurious quantity, and in view of that he would not now argue the point of injury to health in this case, where the percentage of copper was larger. But under Section 5 of the Act the defendant had a good answer to the charge that he had no knowledge that the article was "coloured or mixed so as to render it injurious to health." That was a complete answer to Section 3. The Chairman: What about "reasonable diligence"? Mr. Beck: It is impossible for him to do more. He could not open each bottle to analyse it, before it was sold. Even if the defendant analysed each bottle and found 2.65 per cent. of copper, he would, had he looked up the authorities, have found that anything under 3 per cent. was allowable. The Chairman: And if he had called at this Court he would have found we had convicted with respect to 1.60 per cent. Had he had one bottle analysed he could have satisfied himself. Mr. Beck said that Messrs. Petty, Wood & Co., in selling their peas, made no intimation of the presence of copper, and, as other vendors did, the defendant was entitled to think the omission was significant that the peas were safe for sale. The Chairman: That you say is "reasonable diligence"? Mr. Beck: I do. He proceeded that the public were not frightened by the copper bogey, and still asked for green peas. If they were given brown ones, people would not have them, they returned them; at the same time he thought that the proceedings had had the effect of reducing the amount of copper which manufacturers put in the peas, and many local authorities were

holding their hands till the Departmental Committee of the Board of Trade reported how much copper may be allowed. Mr. Bryant said that when the Inspector called they discussed the law with regard to green peas and the amount of copper in them. He bought the peas about twelve months ago through a traveller of Petty, Wood and Co., who assured him that by being English peas they were safe for sale. The traveller told him they contained a minute quantity of copper, as they could not keep their colour without. Messrs. Petty, Wood & Co.'s price-list contained no intimation of the presence of copper. His customers demanded such peas. He had peas in tins, but they were brown, being free from copper, and people had an objection to them. The Chairman: No, I think it is the tin which people object to. Why not have green-tinted glass for them? By the Inspector: He did not know of an English firm who sold green peas not coloured with copper. He admitted knowing there had been prosecutions for selling green peas. The Chairman said the whole point was "sufficiency of diligence." It appeared that there was a conversation with the traveller, in which the defendant was told the copper was put in these very peas; therefore he could not have used all the diligence he should. At the same time the Bench felt for him that he had been the victim of the wholesale people, and they regretted that the wholesale firm was not before them. In other cases the Bench had convicted, and in order to be consistent they must do so here, and there would be a fine of £5 and costs.

MARGARINÉ PROSECUTIONS.

AT Manchester, on October 18th, Thomas Malone, of 51, Clarendon Street, Manchester, and Michael Malone, of 67, Clarendon Street, Manchester, grocers and provision dealers, were summoned for exposing for sale margarine unlabelled on the 5th ult. An inspector of the Sanitary Department of the Manchester Corporation visited the defendants' shops on the date in question, where he found on the counter a number of parcels. He pointed out to one which was unlabelled, and asked what was the price of that butter. The shopman replied that it was "fourpenny margarine." The inspector then insisted upon being served with 1 lb. of the article, and it was handed to him in a stamped wrapper. The sample was submitted to an analyst, and it was found to be simply margarine, and not butter. The bulk of the article, the inspector added, was not labelled. A fine of £5 and costs was imposed.

JOSEPH NELLAR, a grocer, carrying on business at 28, Dark Lane, was summoned for offering for sale as butter an article composed of foreign fats flavoured with butter fat, on the 5th ult. In this case an inspector paid a visit to the defendant's place of business on the date stated, and upon going into the shop he saw on the counter a substance which was labelled "Pure butter, 10d." Mr. C. Estcourt, the city analyst, said that the butter consisted entirely of foreign fats, and it was worth about as much per pound as the substance in the previous case; 10d. was an outrageous price for the article. The defendant pleaded that he had paid 68s. per cwt. for it; he had put a ticket on it but it had fallen off. He was also fined £5, and costs.

ALBERT EDWARD SMITH, a grocer, of 11, Parker Street, was summoned for exposing on the 6th ult. margarine not properly labelled according to the Food and Drugs Act. In this case two purchases were made from bulks, which were marked "pure butter 1s.," and "pure butter 10d." Mr. Estcourt said that the substances were identically the same, and they were composed of foreign fats. The price in his opinion was ridiculous for such an article. A fine of £5 and costs was inflicted.

MARIA LEIGH, grocer, of Church Street, Newton Heath, was summoned for selling on August 24th last, butter which contained 24 per cent. of water. The inspector having proved the facts of the case, the defendant submitted a warranty of invoice which she had received

from the wholesale dealer, and the case was dismissed. A summons was then taken out against the wholesale dealer, who carries on business at Ashton-under-Lyne. Mr. A. T. Rook, Superintendent of the Sanitary Department, conducted the prosecution.

THE PRESERVATIVES IN FOOD ENQUIRY.

The Liverpool Chamber of Commerce having been informed that the Board of Trade had appointed a Departmental Committee to make investigations into the above-named subject, permission was asked, at the suggestion of members interested, to appoint a delegate or delegates of this Chamber to give evidence before the commission. Permission having been granted, the firm of Messrs. Willer and Riley, Limited, has been asked to send a representative in the interest of the butter trade, other interests being protected by the appointment by the Liverpool Provision Trade Association of two witnesses. Correspondence has been carried on with the London and Manchester Chambers of Commerce with respect to details of evidence, and the former Chamber has nominated several witnesses, including one expert scientific witness.

RESULTS OF THREE MONTHS ANALYSES IN GLASGOW.

DR. R. R. TATLOCK, one of the Glasgow city analysts reports that during the quarter ending September 30th he analysed a sample of marmalade which contained 50 per cent. of starch glucose extraneous to marmalade, one of strawberry jam which contained 15 per cent. of starch glucose, and one of black currant jam which contained 15 per cent. of starch glucose. He also analysed a sample of margarine which, strange to say, consisted of genuine butter. Dr. John Clark, the other city analyst, reported that during the same period he had examined three samples of marmalade which contained respectively 7, 12, and 16 per cent. of dextrin or starch gum; eleven of butter, nine of which were genuine and two of doubtful purity; two of margarine which contained respectively 90 and 92 per cent. of fatty matter not derived from milk; seven samples of camphorated oil, six of which were genuine and one was deficient in camphor to the extent of 42 per cent; seven of olive oil, one of sandalwood oil, two of zinc ointment, and one of iodide of potassium, all of which were genuine; also four of almond oil, three of which were genuine and one was not quite pure; and two of fluid magnesia, one of which was pure, while the other was deficient in magnesia to the extent of 12 per cent.

DRUG ADULTERATION.

WE are glad to see the medical papers paying some attention to this question. At a prosecution at Market Harborough, says the *Medical Press*, it transpired that a seidlitz powder purchased for analysis contained only 9 grains of potassium tart., when it ought to have contained 120 grains, but it made up for the deficiency by containing 127 grains of sodium bicarb., when it ought to contain no more than 40. The usual plea was put in—i.e., that the vendor obtained the powders from a "well-known firm" of middlemen who themselves got them from a London firm "of high standing" in exactly the same condition in which they were sold. This plea reminds us of the epigrammatic charge delivered by a celebrated Judge who was trying a culprit for stealing a horse. Having heard a mass of evidence as to the excellent character and admirable qualities of the prisoner, his lordship said, "Gentlemen of the jury, after the irreproachable testimony which you have just heard, no one can entertain a doubt that the prisoner is a most respectable man, but neither can there be a doubt that he stole the horse, and you will, of course, find him guilty." The "high-class" and "well-known" firms were, of course, supremely respectable but equally guilty.

THE ADULTERATION OF GOLDEN SYRUP.

FEW articles nowadays seem to escape the subtleties of the adulterator. Perhaps the latest form of adulteration brought to light is the addition of glucose syrup to golden syrup, says the *Lancet*. Glucose syrup is made by the action of acids on maize, starch, or even wood. It contains the characteristic sugar known as dextrose, and this is largely used now as a substitute for malt and cane sugar by vinegar makers, and large quantities of glucose prepared in this way are used by manufacturers of fancy sugars and sweetmeats, while it is even used to adulterate honey. We need not urge again the argument which we are repeatedly bringing forward that the purchaser is entitled to have exactly the article for which he asks. If he asks for cane sugar he should be supplied with cane sugar and not with a substitute; for olive oil he should not be given cottonseed oil; nor should any other fat be supplied when he distinctly asks for butter; and so on almost *ad infinitum* and, we may add, *ad nauseam*. It is pretty certain, moreover, that the dietetic value of substitutes in general, is inferior to the genuine article, and we have little doubt that this is so in regard to glucose and true golden syrup. It is probable that the dietetic qualities of the constituents of golden syrup which are all derived from pure cane sugar are more wholesome than the sugars chemically derived from starch and woody fibre. Recent revelations have shown that frequently golden syrup consists of equal amounts of the two sugars. We trust that a sharp lookout will be kept upon this form of adulteration, since golden syrup is a favourite adjunct to food among the poor, and further, it is decidedly nutritive itself, being quite soluble and giving little trouble to the digestive organs. It is scandalous that a pleasing and cheap article of food should be tampered with in this manner.

ALLEGED POISONING BY CORNED BEEF.

NOTHING further has come to light with regard to the sensational attack of ptomaine poisoning which occurred at Sheffield, on October 11th. The inquest on the body of the child Walter Hancock, who died at the Royal Infirmary on Thursday morning, was opened at that institution on October 13th by Mr. Dossey Wightman, the City Coroner, but it was felt that it could not be completed, in the absence of full medical evidence. There is no doubt that the child's death was due to poisoning as a result of eating the corned beef, but the exact nature of the poisoning cannot be stated until the medical officer's analysis of the food is finished, and the inquest was adjourned until that time.

The Coroner, addressing the jury, said he knew nothing of the case except what the official report presented to him stated—that half a pound of corned beef was bought from Lily Sharman, 41, Wentworth Street, on Wednesday; that deceased, his mother, and brother ate about a quarter of a pound, and left the other because it was too salt; that the deceased began to vomit about an hour after, and was taken to the Royal Infirmary at three o'clock on Wednesday afternoon, and died there on Thursday; that Mrs. Hancock also went to the Infirmary and was detained, but the other boy did not suffer much. A post-mortem examination had been made, and he had asked the doctor what he was going to say. The doctor told him that there was a clear case of poisoning from some cause, which, to the best of his knowledge, was the eating of the beef. He (the Coroner) learned that Dr. Robertson, the Medical Officer of Health, was making an analysis of some of the beef in order to find out what it was in the meat that had killed the child, and this would not be concluded for ten days. Under those circumstances, all they could do was to take evidence of identification so that a certificate for the burial of the child could be given, and then adjourn the inquiry.

Harriet Hancock, the mother of the child, was, accordingly, the only witness called. She still looked pale

and weak. She said she was the widow of Joseph Hancock, a file cutter, and lived at 63, Wentworth Street. The diseased child was three years old, and had always been healthy. On Wednesday about noon she bought half a pound of corned beef at Sharman's in Wentworth Street, and an hour later she, the baby, and her son Joseph had some with bread and tea for dinner. At two o'clock the baby began to be sick, and she was similarly affected. Joseph, who had gone to work, was ill at the shop. With the assistance of a neighbour she brought the child to the Infirmary, where it died as above stated. She had bought corned beef at the shop several times before, and that which she got on Wednesday was similar, but she could not say whether it was of the same brand. She had never felt any ill effects from corned beef before. Only half of the quantity bought was eaten on Wednesday, and she produced the remainder. She was recovering now. She was confident that it was the beef, and not anything else he ate which caused the baby's death.

The inquest was adjourned until Monday October 30th. All the other victims to the poisoning are reported to be progressing favourably.

FOOD PRESERVATIVES.

DR. RIDEAL referring to the experiments conducted by Dr. Foulerton and himself, says that boric acid 1:2,000 (4 grains to the pint), or formic aldehyde 1:50,000, was sufficient to keep milk sweet for twenty-four hours even in warm weather, while the use of the preservative in these quantities appeared to have no appreciable effect upon digestion. Hehner had stated that the experiments showed that digestion was retarded, but Rideal contended that such retardation was so small that it might be disregarded. He had made some supplemental experiments with the same drugs in the same strengths, and he found that the digestion of starch was more interfered with than the digestion of milk.

BREADCRUMB, 5 C.C., WITH 50 C.C. WATER EXPOSED TO ACTION OF FERMENT FOR HALF AN HOUR.

	ZYMINE.	SALIVA.
	Maltose produced.	
1 Nothing added ...	0.5395 = 100	0.707 = 100
2 Formic aldehyde, 1 in 50,000...	0.477 = 88.5	0.672 = 95
3 Boric acid, 1 in 2,000 ...	0.423 = 78.5	0.607 = 86
4 Malt vinegar, 2½ c.c. ...	0.258 = 48	0.1647 = 23
5 Salt, 0.2 gramme ...	0.52 = 97	0.70 = 99
6 Worcester sauce, 1 c.c. ...	0.5 = 93	0.57 = 82
7 Alcohol, 5 per cent. (claret and water, 25 c.c. of each) ...	0.47 = 88	0.767 = 99
8 Tea, ½ gramme infused in 50 c.c. of water ...	— 91	— 92

Food, of course, would remain in the stomach, and be subject to the action of the ferments for a longer period than half an hour. Cases were on record showing that rash, nausea, and headache might be produced when as much as a gramme of boric acid was taken daily by an adult.

Professor Bostock Hill considered these experiments as an argument for the non-use of preservatives. Their use even in small quantities was shown to cause greater demands to be made upon the digestion of the individual. It was especially important that milk should be free from preservatives, as the profession were endeavouring to persuade the public to give milk to their babies instead of starchy compounds. He thought the proportion of vinegar used in the experiment was too high.

Dr. Handford said that last year sickness and diarrhoea occurred in the children's ward of Nottingham Hospital, and on analysis it was found that the milk supplied contained 40 grains of boric acid in a gallon. Babies having 2 pints of milk a day were therefore receiving a dose of 10 grains. The diarrhoea ceased so soon as the boric acid was discontinued. A clause was now inserted in their contract with the dairyman that no preservative or foreign substance should be added to the milk. Dr. Rideal wished it to be clearly understood that

he did not advocate the use of preservatives, and he objected to infants and invalids having food to which chemicals had been added. The feeling of the meeting was strongly in the direction of forbidding their use entirely.

THE PRESENCE OF LEAD IN FOOD.

DR. CHARLES P. WORCESTER, of Massachusetts, has carried out an examination of the metallic foil used in packing food and the metal stoppers of certain kinds of bottles and jars in which preserved fruits and aerated waters are sold. Dr. Worcester found that lead was present in the form of an alloy in amounts varying from 93.5 per cent. to 0.2 per cent. of the alloy. The contents of twenty-eight metal-stoppered bottles of fruit syrups and beverages were analysed. Lead was found in all the samples. The maximum amount was 1.05 milligrammes of metallic lead per bottle, and the minimum 0.05 milligramme. The percentage of lead in the stoppers of these bottles varied from 3.5 to 50.7. While the amount of lead found in the contents of the bottles was in no case very large, it was, in the opinion of Dr. Worcester, sufficient to condemn the use of lead in the manufacture of the stoppers. The variations in the amounts of lead found in the contents of the bottles, being quite irrespective of the percentage of lead in their stoppers, may be ascribed to different causes, such as the difference in the amount of acidity in the various liquids and the length of time that the liquid has been in contact with the stopper. Furthermore, the more soluble metal of a double alloy is attacked by an acid with an energy which is not proportional to the percentage of that metal in the alloy.

THE INFLUENCE OF FOOD PRESERVATIVES ON DIGESTIVE ENZYMES.

By H. LEFFMANN.

THE enzymes used in the author's experiments, which had references principally to the digestion of starch, were: Malt diastase (Merck); pancreatic extract (Parke, Davis and Co.); peptenzyme, a preparation containing all the digestive ferments of the alimentary tract (Read and Garnick); and papain, the enzyme of papaw sold under the name of "catoid." In each experiment 50 c.c. of a freshly-prepared solution of arrowroot-starch (10 grammes per litre) were used. The following results were obtained in a series of experiments with taka-diastase, 11 milligrammes of the enzyme and 50 milligrammes of the preservatives being used in each case, and the solutions diluted to 150 c.c. after the digestion:

1. Salicylic Acid: Showed starch reaction strongly, and only traces of sugar; 133 c.c. of the solution did not reduce 10 c.c. of copper solution (equivalent to 0.016 gramme of dextrose).
 2. Sodium Benzoate: No starch present; much sugar formed.
 3. Saccharin: Much starch present; traces of sugar.
 4. Boric Acid: No starch present; much sugar formed.
- With pancreatic extract solution the results were:
1. Salicylic Acid: No sugar formed.
 2. Sodium Benzoate: Much sugar formed.
 3. Saccharin: Trace of sugar formed.
 4. Boric Acid: Much sugar formed.

Saccharin in small quantities (10 milligrammes) interfered with the digestion of starch by taka-diastase (10 milligrammes), by papain (20 milligrammes), and to a lesser extent by peptenzyme. Formalin (3 c.c.) did not affect taka-diastase (11 milligrammes), but 1 c.c. had an injurious effect on pancreatic extract (1 c.c.).

From the results of these and similar experiments, which are given in tabular form, the author has arrived at

the following general conclusions:—Beta-naphthol is injurious to malt-diastase, but does not seriously affect the starch-converting capacity of the taka-diastase or pancreatic extract. Boric acid, borax and boro-glyceride interfere but little with either starch or proteid digestion. Salicylic acid interferes with the action of most of the enzymes, especially those that convert starch, but does not seriously affect proteid digestion. Sodium benzoate has no appreciably injurious influence on any of the enzymes. Sodium fluoride interferes but little with the digestion of starch, but sodium silicofluoride has a considerable influence on pancreatic extract.

In the author's opinion, if the use of a preservative is to be permitted in food, boric acid and sodium benzoate are the least objectionable, since they have less tendency to disturb the digestive functions than the other preservatives commonly employed.

THE PRESENCE OF MERCURY AND LEAD IN COSMETICS.

A special investigation of hair-washes and face-powders has been made by the analysts of the Board of Health, Massachusetts. Lead was found to be present in amounts varying from 0.3 per cent. to 2.32 per cent. A hair-dye having a large sale in England was found to contain 2.3 per cent. of lead.

Lead-poisoning has been known to occur from the external use of such preparations. Corrosive sublimate, or other poisonous salts of mercury, were found in the proportions of from 1 to 15 grains per ounce. In one instance a 6-ounce bottle contained 47 grains of corrosive sublimate. Another contained 14 grains of bichloride of mercury per ounce. It is not surprising that cases of serious injury result from the use of such preparations.

COCOA: ITS MANUFACTURE AND FOOD VALUE.

DR. GOODFELLOW, of the East London Technical College, in a lecture on October 3rd said, cocoa is a vegetable product derived from the cacao tree, a native of tropical countries. The name must not be confounded with the coco (cocoanut) or coca, a small shrub which produces leaves having narcotic properties. The correct designation of the tree is *Theobroma Cacao*—the former meaning literally, "Food for the Gods." It is an evergreen tree, growing to an average height of about 22 ft., and bears leaves, fruit and flowers simultaneously. The leaves are oblong and droop gracefully from the branches, reaching a maximum length of about 25 ins. The fruit or pod, 6 ins. long, grows directly off the trunk and the larger boughs, and when ripe resembles a small water melon. Each pod contains from thirty to forty seeds about the size of almonds. These seeds or beans are brown in colour, and when broken separate into the familiar cocoa nibs. The tree flourishes chiefly in warm, moist countries, and is grown generally in all parts of Central America and the West Indies. Of late years it has been cultivated with considerable success in Ceylon. An eloquent writer thus describes the appearance of a cocoa plantation:—"Thus beautiful cocoa avenues are made, roofed in by the spreading branches of the cocoa mother. When the latter is in flower, in March or April, it sheds its leaves, and the tops of the trees are then covered by crimson flowers, that, seen from a height in the glittering rays of the tropic sun, shine forth like a sea of brilliant red flame—an indescribably beautiful, never-to-be-forgotten sight. The branches do not grow low, so that in looking down a piece of ground the vista is like a miniature forest hung with thousands of golden lamps. Anything more lovely cannot be imagined." (A series of magnificent coloured views were here thrown on the screen of the districts mentioned, specially painted, and lent by Cadbury Brothers.) When the pods are ripe they

are cut off by means of a cacao-hood, or machette, and broken by a short knife. The beans are then removed by women and stored into baskets.

MANUFACTURE.

The first stage of the process is carried on the plantation. The beans are thrown into shallow boxes and allowed to stand for six to twelve days, during which time a slow fermentation goes on, and they become darker and lose much of their unpleasant flavour. The beans are finally dried in the sun and are then ready for export. The home manufacture of cocoa has increased by leaps and bounds. In 1820 under 130 tons of raw cocoa were manipulated in England. In 1896 the quantity had risen to 11,000 tons. The manufacturing process as carried on in the model factories of Messrs. Cadbury Brothers, consists of (1) *Sorting*, during which all unsuitable beans are rejected. (2) *Roasting*, carefully carried out in slowly-revolving iron cylinders. The utmost precision is necessary in this operation, otherwise the full flavour is not developed. (3) *Nibbing*, so called, because the machinery breaks up the bean and removes the shell, thus freeing the nibs. (4) The final process of *Grinding*. This is effected by revolving grindstones, which gradually reduce the nibs to a fine powder.

FOOD VALUE.

Taking a typical pure cocoa free from all additions or chemical treatment and reaching the highest possible standard of nutritive value, it has the following composition:—

Cocoa butter	...	...	30.89
Theobromine	...	...	2.85
Carbohydrates, &c.	...	...	22.87
Proteids...	...	...	29.73
Water	...	...	9.82
Ash	...	...	3.84

100.00

The Fat or cocoa butter is a solid, white, inodorous fat, and does not readily become rancid. Its melting-point is about 80 deg. F., and it is capable of saponification. The theobromine belongs to the class of bodies known as vegetable alkaloids, and is closely allied to the similar principles found in tea and coffee. It acts as a stimulant to the nervous and circulatory systems. The starch and albumin are valuable food stuffs, and the ash consists largely of potassium phosphate. The cocoa bean is thus very rich in fat (heat-producing) and albumin (flesh-forming). In addition, the bean contains a small quantity of an aromatic principle. The large percentage of cocoa butter, however, renders it objectionable to most people, and the percentage is reduced by expressing the oil mechanically. Cocoa when properly prepared is a most valuable article of food, though not a very powerful stimulant. Tea and coffee are merely stimulants to the nervous and circulatory systems, and practically do not supply any nutrient material to the body. But cocoa, while being a slight stimulant to the jaded system, is, at the same time, a nourishing food of the highest value and importance. It may be made, with care, a perfect food in itself, supplying all the constituents required by the animal economy for health and strength, and the increasing demand for cocoa indicates that the public are beginning to appreciate its many admirable qualities as a food-beverage. Cocoa is not, however, the only palatable article prepared from the cocoa-nib. Chocolate, so dearly loved by one and all, is simply cocoa mixed with a due proportion of sugar and flavouring principles, very finely incorporated and ground in mills, and pressed into the familiar cakes and slabs. The modern

TENDENCY TO INTERFERE WITH THE NATURAL PROPERTIES

and constituents of such a valuable food as cocoa is deeply to be deplored. The removal of the fibre and the excess of fat is all that is necessary to produce the most perfect food beverage known to physiologists, and the best cocoa from the dietetic standpoint is undoubtedly that which is

perfectly pure without addition of any kind whatsoever. Some manufacturers add starch or sugar in the mistaken idea that starch properly replaces the fat removed. But in no case can starch take the place of fat in a food, and the result is simply to lower the flesh-forming qualities of the cocoa so treated. Starched cocoa is really a very poor food, and should be avoided by all who wish to get the most nutriment at the lowest cost in the form of pure cocoa. Malted cocoa, so much in vogue lately, is merely a fad, and has no actual food value over the plain article. The malt is added because it contains a ferment termed "diastase," which has the power of converting starchin to sugar, and if the malt retained this power in the cup of cocoa its inclusion could be defended. But the diastase is killed at 175 deg. Fahr., and therefore the digestive action of the malt is entirely destroyed by the addition of the boiling milk or water to the powder or paste in the cup. Inasmuch as malt is inferior to cocoa in actual food value, its addition to cocoa lowers the nutritive value of the beverage. The use of hops is also entirely useless as far as practical results are concerned, for if sufficient hops were used to be of any service as a tonic to the stomach, the flavour of the cocoa would be so influenced as to make it quite unpalatable, and as the hops have no nutritive value, the addition is without beneficial results. The treatment of cocoa with potash is to be strongly condemned, as the slighter solubility obtained is more than counterbalanced by the injurious effects of the chemical upon the system, and those who value good health would be well advised to leave such cocoas alone. Perhaps the most novel departure of late years is the addition of kola to cocoa. Kola is a powerful drug, and contains besides caffeine other potent nerve stimulants of an unknown character. It is impossible to defend on hygienic grounds the addition of such a powerful drug to an article of daily consumption, and though under medical advice, and in exceptional cases, the increase of nerve stimulating properties which kola confers on cocoa may be beneficial, yet to the masses such uncontrolled drugging may be followed by serious consequences. Pure cocoa is so rich in good dietetic properties that to interfere with the normal proportions of the food principles is to notably decrease its nutritive value, and I strongly urge the exclusive use of pure cocoa solely in the interests of the public health.

MARGARINE OR BUTTER SUBSTITUTES.

Their Manufacture, Nutritive Value, and Conditions of Sale.

By W. JAGO, Esq., F.I.C.

THE best quality fat of recently killed bullocks was finely cut up and slowly steam-cooked until the fat had separated from the membranes. The fat was then cooled and subjected to hydraulic pressure, and there remained a more solid portion, termed stearin, and a semi-fluid part, known as oil or oleo, was squeezed out. The name "oil" was slightly mis-leading, since the product was really a granular solid, of a slightly yellow colour. Fresh lard was treated in the hydraulic press in somewhat the same way, the more liquid portion being the "neutral" of the margarine manufacturer, and was a granular solid of a white colour. The fats thus obtained were, so far as possible, free from taste and odour, and also yielded a finished product which melts readily in the mouth. To make margarine, these fats were taken in the requisite proportions, and the oleo being slightly the harder, rather more of it was taken for margarine intended to be used in warm climates, and the reverse for climates that were colder. The fats were melted together and mixed with a certain proportion of milk or cream and of butter colouring, and thoroughly agitated, run into cold water, washed, and then salted and worked exactly like butter. The result was the margarine of commerce. The addition of pure butter during the process of manufacture resulted in a more pleasant-flavoured product, such product entering

the market as "mixture." This must in the first place depend on the chemical composition. Both butter and margarine consisted, so far as nutritive matter was concerned almost entirely of fats. Quantities of fat were nearly the same in both. Margarine fats contained nothing that butter fat did not also contain, and differed from it in the absence of about 6 per cent. of the glycerides of certain soluble fatty acids, butyric and capronic, &c. With regard to its digestibility, experiments had been made by Mayer, and the results showed about 98 per cent. of butter fat digested, against 96.3 per cent. of that of margarine, giving a slight advantage in favour of butter. Butter might have some superiority as a result of its flavour, causing it to act as a stimulant of the appetite for bread or other food comparatively devoid of flavour, but experimental confirmation of this was somewhat lacking. Margarine could not successfully imitate butter unless made from wholesome fat and in a cleanly manner. Demands for cleanliness were just as forcible on both butter and margarine makers, and lapses from the proper conditions as likely to occur with one as with the other. As to the conditions of sale the proposed colouring of margarine was a most objectionable suggestion, for appearance was a most important factor in the appetising nature of food. Let them fancy a slice of bread and green or pink butter. The appetite revolted against it. The consumer of margarine had just the same right to say that his food should not be made to look disagreeable as the consumer of butter or anything else.

Correspondence.

TO THE EDITOR OF *Food and Sanitation*.

THE PERCENTAGE OF WATER IN IRISH BUTTER.

SIR,—It is becoming a common practice in England to speak of Irish butters as being always more or less watery, and as this is often unjust, though sometimes true I trust the results given below of the analyses of butters from the first surprise butter competition conducted by the Irish Dairy Association may prove of interest to many of your readers.

Sixty-three packages of butter were sampled, and from the nature of these surprise competitions these samples must represent the average composition of Irish creamery butter as regards water-content in the month of September. The average percentage in sixty-three samples was only 12.90, the minimum being 10.60 per cent. and the maximum 15.8 per cent., while only eighteen of the sixty-three samples taken showed as much as 14 per cent. of water.

Two samples were below 11 per cent., six samples were between 11 and 11.5 per cent., five samples were between 11.5 and 12 per cent., eight samples were between 12 and 12.5 per cent., thirteen samples were between 12.5 and 13 per cent., ten samples were between 13 and 13.5 per cent., eight samples were between 13.5 and 14 per cent., seven samples were between 14.5 and 15 per cent., and only three samples out of the sixty-three showed more than 15 per cent. of water, the maximum being, as stated, 15.8 per cent.

I am, &c.,

WALTER THORP,

Hon. Secretary Irish Dairy Association.

57, George Street, Limerick, October 18th.

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Food and Sanitation.

SATURDAY, NOVEMBER 4, 1899.

THE LAW UPON WEIGHING PAPER WITH TEA.

Important Decision.

THE public as well as wholesale and retail tea dealers should note carefully the decision of Justices Ridley and Darling in the Court of Queen's Bench on October 27th.

The case was that of Lane v. Rendall, in which Mr. Daldy and Mr. Horace Avory appeared for the appellant, and Mr. George Elliott for the respondent.

Mr. Daldy, in opening his case, said it was once stated by Justices of the Wandsworth Division, London, under the Weights and Measures Act, and it raised a question whether a man was entitled to put under the scale in which he weighed out packets of tea, a piece of paper, so as to make his customer get less than required, or whether he by doing so could be convicted of giving unjust weight. An information under Section 25 of the Weights and Measures Act, 1878, was laid against William Rendall for having in his possession for use or trade a weighing-machine which was false or unjust. The facts were not in dispute. The appellant was an Inspector under the Weights and Measures Act, and the respondent carried on business as Melrose and Co., tea merchants, amongst other places at 276, Battersea Park Road, S.W. Appellant went to the respondent's shop there and found a weighing machine which respondent had in his possession for use or trade. When the machine was examined by appellant he found there was piece of paper underneath the scoop, wedged between the bottom of the scoop and the cross bar on which it rested. The effect of adding this paper was to make the scale indicate a weight of $1\frac{1}{2}$ drams in excess of the actual weight of the article in the scoop. In the absence of the paper the weighing-machine would show accurate weight. At the time the scale was examined the respondent's servants were engaged in using the same for the purpose of weighing up tea to be made into packets. The piece of paper had been placed by defendant's manager under the scoop instead of in the scale—in accordance with the usual process—to facilitate the process of weighing the tea, and so to cause the customer to assist in defraying the cost of the paper in which the tea was sold. *Mr. Justice Darling said it might just as well be for the purpose of defraying a portion of the manager's salary.* Mr. Daldy, continuing, said it was contended for the respondent in the court below that the weighing-machine was not in itself unjust and untrue, and that it was a custom of the trade to weigh the paper with the tea, as was established by a decision in the High Court. Further, that as the machine was not in itself unjust, the proceeding ought not to have been taken under Section 25, but under Section 26 for fraud. The Magistrates were of opinion that the weighing-machine being *per se* true and just could not be rendered untrue and unjust by merely using the paper in the manner described, and they therefore dismissed the summons. He contended they were wrong, because it was admitted the piece of paper was deliberately applied to the weighing-machine in such a way that it acted as part of the weighing-machine, and caused it to indicate a greater quantity than was really actually weighed. It was not a case where it was openly done and agreed to, but it was done to quicken the process of weighing and to cause the customer to assist in defraying the cost of the paper bag or wrapper. No one decided what the paper was to weigh, nor what was the

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object in putting it there. Mr. Justice Darling: It would be more honest to charge the customer more for the tea than to make him pay for the wrapper in this way. Mr. Daldy added that this charge spread over a great number of packages would help him to pay the rent of his shop. Mr. Elliott, for the respondent, argued at length and with much ability that the public know universally that tea is weighed with paper, but Mr. Justice Ridley refused to accept the statement saying "Speaking personally, I never knew I bought tea with paper. I decline altogether to be bound by such nonsense. If I buy a pound of tea I expect to get tea and not so much paper. If people take it so much the worse for them." Mr. Elliott then contended that the various competing firms charged a price for tea based upon the practice of weighing the paper with it and stated that Mr. Justice Matthew in a similar case said the practice was so well known and universally followed, and there could be no pretence for saying fraud was intended. Mr. Justice Ridley said he did not say anything about fraud. I say if a man asks for a pound of tea he ought to get it. Mr. Elliott then stated that as to the effect of the paper, the effect was said to render the scales false or unjust under the Weights and Measures Act. How could a piece of paper be said to make a scale unjust? The scale remained intact and capable of giving just weight. The paper was a mere incident in the transaction. It could not be said that by using the paper they in any way manipulated the scales. Mr. Justice Darling: But as long as the piece of paper is on the scales the scales will not weigh truly. Mr. Elliott said his point was that they could not look at the paper as if it was any other heavy substance, because the paper was part of the legitimate selling of the tea. He repudiated the idea that paper could be used in the sense of turning a just scale into an unjust one. Mr. Justice Darling: With that piece of paper there permanently the scale was not a balance. The arm where the paper was would always go down. Mr. Justice Ridley said he did not see why such a custom should grow up, that a man was entitled to sell to the public tea, part of which was paper. Mr. Daldy said he must not be understood as admitting there was any such custom as selling tea with paper, or that there was any legal decision to that effect.

In giving judgment, Mr. Justice Ridley said they had come to the conclusion that the case must be sent back to the magistrates with an intimation that they must convict. The charge was not made under Section 26, therefore the decision of the Court did not involve an application that the respondents had been fraudulent. Speaking personally he was very willing to accept the position that these gentlemen did not adopt this practice of putting a piece of paper under the scale for the purpose of defrauding customers who came into their shop. He believed it to be perfectly correct that this was done for the purpose of facilitating the conduct of the business, which was on a large scale, and therefore made it impossible that they should in the presence of each customer weigh with the paper the tea that was to be furnished in accordance with the order. Upon that point, therefore, Mr. Elliott succeeded, and he would have the satisfaction of knowing his clients could not be convicted under Section 26. The main question was whether or not they were in fact guilty of the offence with which they were charged under Section 25. The scale or measure as used habitually was used with a piece of paper, which added to the weight, and which practically made the scale in the same condition as it would have been if weighted with a piece of metal or any other substance. As so used, in his view, the weight or scale was an unjust one. They must take it as habitually used, and the scale as it stood without the goods on was not true, nor would it show the actual weight of goods put on it. He therefore thought it was a case within the Act of Parliament of using a scale or measure which was false and unjust, for it was not so as used. Mr. Elliott said he had a right to do it because there was a universally known custom that the person who bought tea bought tea and paper. He could not agree that there was any custom in this country which compelled a person buying tea to take tea and paper. It might be done, and done without a dishonest purpose, but that did not in the least degree make the scale a true balance because as used it did not show the true weight. He thought, therefore, the magistrates ought to have convicted. Our readers will readily see how important and far reaching is this decision and retailers especially will do well to carefully note it.

MILK.

At Belfast, on October 23rd, Inspector David M'Master, summoned George Magill, of Ballyberniece, Lyle Hill, for selling adulterated sweetmilk. The inspector said that he purchased a pint of sweetmilk from the defendant's servant. Witness forwarded a sample of the milk to the public analyst, Professor Hodges, who returned a certificate to the effect that the milk was adulterated with 10.48 per cent. of water. Mr. Tughan entered a plea of guilty, and his Worship imposed a fine on defendant of £3 and costs.

WILLIAM JOHN CARUTH, of Mallusk, was summoned by Inspector M'Master for a like offence on the 14th September. The same professional gentlemen appeared as in the last case. Inspector M'Master said he found the defendant's servant delivering sweetmilk at a shop in New Lodge Road. He purchased a quantity of the milk and sent a sample to Professor Hodges, who certified that the

milk was adulterated with 12·12 per cent. of water. A fine of £3 and costs was imposed.

At Darlington, on October 24th, John Burnside, farmer, of Brankin Moor, was summoned for selling milk, which, according to analysis contained no less than 41 per cent. of added water. A sample was taken on 10th October by Mr. T. A. Atkinson, the inspector, and analysed. Defendant admitted the offence, but said the water was added by his servants unknown to him. He had plenty of milk to spare. The Bench considered the case a very bad one, and imposed a penalty of £5 and costs, or £5 18s. in all.

At Dublin, on October 25th, Peter Wogan, Little Britain Street, was summoned by a Corporation Food Inspector, for selling milk adulterated with 23 per cent. of water. Mr. Mahony, in imposing on the defendant a fine of £5, said he found that he had been six times previously convicted of similar offences. People like the defendant, who mixed milk with polluted water, were the cause of the spread of disease through the city.

At Liverpool, on October 25th, James Harrison, milk dealer, of 61, Robson Street, was fined 10s. and costs for having sold as new milk a liquid containing only 2·56 per cent. of fat and 8·98 other solids, and deprived of part of its cream.—James Morris, milk dealer, 156, Northumberland Street, was fined 40s. and costs for having sold as new milk a liquid which did not contain 8·5 per cent. of solids other than fat, and to which upwards of six parts of water had been added to every hundred parts of the poorest milk.

At Clerkenwell, on October 25th, D. D. Jones, of 6, Pulteney Street, Clerkenwell, was fined for selling milk containing 7·1 per cent. of added water, on the 3rd September, £5, with 12s. 6d. costs.—Daniel Green, of 44, Margaret Street, was fined £10, with 12s. 6d. costs for selling milk diluted with 15 per cent. of added water.—John Davis, of 200, Grays's Inn Road, for selling milk from which 12 per cent. of the cream had been abstracted, was fined 40s., with 12s. 6d. costs; and for having it diluted with 14·3 per cent. of added water, was fined a further sum of 40s., with 2s. costs.—Jane Baker, of 12, Ann Street, was fined 10s., with 12s. 6d. costs, for milk adulterated with 7 per cent. of added water.—James Carter, of 9a, Ann Street, was also fined 10s., with 12s. 6d. costs, for milk containing 7·8 per cent. of added water.—The Clerkenwell Vestry prosecuted in all the cases.

At Leicester, on October 27th, Elizabeth Ludlam, milk seller, Queen Mary Street, was summoned for selling to John Henry Gray certain new milk which was not of the nature, substance, and quality demanded, the same having 6 per cent. of added water. The Town Clerk (Mr. Bell), prosecuted, and said he thought the defence was that she had a warranty that the milk was pure. He himself had not seen the alleged warranty, but he did not think it was specific to the milk in question, and therefore it was not a defence under the Act; and he quoted a case in which it had been established that there must be a specific warranty. John Henry Gray, Superintendent of Nuisances and Inspector under the Drugs Act, said he went to defendant's shop. He asked for a pint of new milk; she served him, and he told her it was for the purpose of a public analysis. She said she should rely on the "warranty" given by the Callow Park Dairy Co., who supplied the milk. The Town Clerk read the Borough Analyst's (Dr. Monk's) certificate, showing 6 per cent. of added water. Defendant: I am quite innocent; I only had half a gallon of it, and the gentlemen was the first I served. She then produced what she regarded as the guarantee for the purity of the milk. The Magistrates' Clerk said he was afraid this was not a guarantee—it was only a handbill. It was no protection to her. It contained the following sentences: "And we wish it to be distinctly understood that the milk sold by us is absolutely pure, and contains all its cream as produced from the cow, and no better can be bought whatever the price may be." Defendant: I am sure I can't help it. I am innocent. I went to

the manager, who said he did not take a sample of the milk that morning. The Chairman said that the Magistrates thought the case was proved. They were thus bound to convict. At the same time they wished to express the opinion that the paper (referring to the handbill put in by defendant) was not at all a right paper to be sent out. The Chairman added: It is calculated, we think, to deceive people in defendant's class. We think that either there should be a proper guarantee given or else no paper of this sort should be issued. You (to defendant) are liable to a very heavy fine, but the Magistrates will fine you the very low fine of 20s.—Walter Hopewell, described on the police sheet as "milk seller," Abbey Park Road, was summoned on a similar information, but in this instance it was alleged that 90 per cent. of normal fat had been removed. Defendant: I am guilty in a sense, but I have never sold any milk, not a ha'porth. The Town Clerk said this was a more serious case. The only defence was that defendant did not understand the business, but if he engaged in a business he ought to understand it; it was no reason why he should sell to the public milk with nearly all the fat taken out of it. John Henry Gray said the defendant was an unregistered milk seller. It was a greengrocery and confectionery shop. Witness asked for a pint of new milk. Defendant's wife was in the living-room, next the shop, and she told the girl to fetch a bottle up from the cellar, which she did, and Mrs. Hopewell served him with a pint of milk, for which he paid 1½d. During the time she was serving him he asked, "Is it new?" and she said "Yes." He subsequently told her that the milk was bought for the purpose of public analysis. Mrs. Hopewell thereupon said it would not do for that, but he replied that he had asked for new milk. She then said she did not understand it. The Town Clerk read Dr. Monk's analysis, showing that he was of the opinion that at least ninety per cent. of the normal fat had been removed. The Magistrates' Clerk: It is difficult to say what is left! (Laughter.) Defendant: We have been in business just about three months at this shop, and we have had sickness in the family. We were told to give them as much milk as possible; so we got some sterilized milk. If we have sold a shillingworth it is as much as we have sold. We never bought it with the intention of selling; we bought it for the children; it was only the neighbours who had any, and they had it in halfpennyworths—they said they should like to have some just to see what it was like; that was the only bottle of milk in the house. We never had anything to indicate we sold milk. We bought it from the Leicestershire Dairy Company. The Chairman: The magistrates consider this to be a very much worse case than the last. Sterilized milk is, of course, perfectly good. We know that perfectly well. It is no answer to say it is sterilised milk, because, unless tampered with, it would have the ingredients of full milk. (To defendant): You will be fined £2, or a month's imprisonment.

LIME JUICE.

At Cork, on October 23rd, Joseph Hayden, mineral waters manufacturer, Maylor Street, was also summoned by Sergeant Ralph for having refused to supply him with a sample of lime juice cordial. The offence was alleged to have been committed on the 26th ult. Complainant, in reply to Mr. Galvin, solicitor, who appeared to prosecute, gave evidence of having called at defendant's premises on the date mentioned. He asked the defendant, who was in the store, if he had lime juice for sale, and he replied in the affirmative. Witness then asked him for a half-pint as a sample under the Food and Drugs Act, and presented a shilling in payment. Defendant paused and said, "Well, I won't give it to you now." He added that if witness came back in a hour's time he would supply him. Defendant denied that he had refused to supply complainant. What he had said was that he could not supply him, as the person who had charge of the keys of the store was then away. The stuff was locked up, and he could not get at it. A fine of 10s., with 10s. costs was imposed.

WATER AT SPIRIT PRICE.

At Darlington, on October 24th, William Morgan, of the Allan Arms, Albert Hill, was fined 20s. and costs for selling brandy 35·2 per cent. under proof on the 11th October. Mr. Smith for the defendant, admitted a technical offence, but informed the Bench that defendant had but newly entered the business of a publican, and during his temporary absence his wife had filled the brandy bottle up with water to be used more for decorating the bar than anything else.

At Worship Street, on October 24th, Mrs. Emma Coake, landlady of a public house at 169, Mile End Road, was summoned by the Sanitary Authority of that parish for selling brandy adulterated 9·4 degrees below the minimum strength allowed. The Defendant said she supposed it was true, but she had been away in the country. Mr. Corser told her that she should exhibit notices in the bar; and the Defendant said that she had notices, but they were hidden at the time. She was fined 20s. and 12s. 6d. costs.

MARGARINE PROSECUTION.

At Cork, on October 23rd, Mrs. Hannah Murphy, 45, Barrack Street, was summoned by Sergeant Ralph, Inspector under the Food and Drugs Act, for having sold margarine in a paper package without having the paper stamped with the name of the article, as provided by the statute. Mr. B. Galvin, solicitor, who appeared for the Corporation, said that up to six months ago there were only three shops selling margarine in the South side of the city. This number had latterly increased very much, and the prosecution was brought to make it understood by dealers that the provisions of the statute should be complied with. The law required that papers in which margarine was wrapped for sale should be stamped, and its provisions would be strictly enforced in future. Sergeant Ralph, examined, gave evidence of having purchased a sample of margarine from the defendant. It was supplied to him in an unstamped package, and the defendant told him she did not know it was necessary to have the paper branded at all. The box out of which the sample was taken was branded. A fine of 5s. and 5s. costs was imposed.

COFFEE.

At Hereford, on October 23rd, 1899, William Pearce, grocer, High Town, was summoned for selling coffee adulterated with 19 per cent. of chicory, to the prejudice of the complainant, Mr. S. Protheroe, Sanitary Inspector, on September 25th. Mr. W. T. Carless appeared to prosecute and Mr. J. H. Jacob to defend. Mr. Protheroe said that on September 25th he visited the defendant's shop and asked to be supplied with one pound of coffee; Mr. Pearce asked what price; witness then asked for a pound at 1s. 6d., and was served by Mr. Pearce; it was served in a paper on which was printed "fresh roasted coffee;" he told Mr. Pearce that he had bought it for analysis, and asked him if he would have it divided; he did not, however, wish to have it divided; the analyst's certificate stated that the coffee contained 19 per cent. of chicory. Cross-examined, He asked simply for coffee; he knew that the greater part of coffee sold was a mixture of coffee and chicory, but that should be sold in a paper, on which it was stated that it was a mixture; at the same time he bought some mustard and pepper, and these were perfectly pure. Mr. Jacob, addressing the Bench for the defence, said that he need not say that Mr. Pearce was very annoyed at being summoned, because he was a very old tradesman in the city, and this was the first time that he had had the misfortune to be charged with any technical offence like this. Mr. Pearce sold three sorts of coffee, at 1s. 4d., 1s. 6d and 1s. 8d. per lb. respectively. The 1s. 8d. was pure coffee, and the 1s. 4d. and 1s. 6d. were mixtures

of coffee and chicory. Mr. Pearce sold to Mr. Protheroe the 1s. 6d. coffee. It was the usual sort which he sold to his customers at that price. The papers in which the pure coffee was sold by Mr. Pearce had the words "Fresh roasted coffee" printed on them, and the papers in which the coffee and chicory were sold had "Fresh roasted coffee and chicory" on them. The papers were both the same colour, and Mr. Pearce made a slip in taking the wrong paper to put coffee in for Mr. Protheroe. He put it one which had "Fresh roasted coffee" on it instead of one on which appeared the words "Fresh roasted coffee and chicory." Mr. Pearce had no intention whatever of committing fraud when he sold the coffee. The Chairman said that the Bench were of opinion that the case was quite clear. They believed, however, that there was not the slightest intention on Mr. Pearce's part to defraud, but he had, unfortunately, broken the law. He would be fined 1s. and costs 20s.

CAMEMBERT CHEESE.

In the current issue of the *Journal of the British Dairy Farmers' Association*, Mr. Granville E. Lloyd-Baker, of Hardwicke Court, Gloucester, has a short article descriptive of the Camembert cheese industry. He says:—

"This cheese, though a favourite dainty in Paris, was but little known or appreciated in England till about 20 years ago, when there was a sudden invasion of London clubs, refreshment rooms, and shops by this small and convenient luxury. It has since spread to many parts of the country, especially watering places, where its small size makes it suitable for people staying for a short time in lodgings. As yet, nearly all has been imported from France; and if any is made in England it is not made regularly, and it is not a recognised article of trade. This is a pity, for it is extremely profitable; a skilful maker can realise as much as 14d. per gallon for her milk. There is no reason to suppose that our soil or climate are unfit for it, and it seems extraordinary that we have not yet established it as an industry of our own country.

"I have been asked to give some account of the making of this cheese in Normandy, where I had an opportunity a few years ago of visiting some of the best farms. I have revisited the country lately and found no change except an apparent increase in the quantity put out. Last autumn the platforms of the stations in the neighbourhood of Lisieux were all encumbered with vast crates, whose smell left no doubt as to the contents. An enormous number of these were coming to England, and one could not but reflect that if Camembert cheese was produced at home, a very large sum would be retained in the country.

"The first farm that I visited was that of the Marquis de Cussey at his Chateau of Jucoville, about five miles from Isigny. This is not in the regular district for Camembert cheese: the neighbouring farms are devoted to the production of the famous beurre d'Isigny, which holds the first place in the butter market of Paris. M. de Cussey, having a large farm in hand, brought some dairymaids from the Camembert district, and made the highest class of Camembert cheese, showing that the soil of one district was not the only one capable of producing this article in perfection. He had a herd of 30 cows of the Norman breed called Cotentin, large mulberry and white animals, which are considered to unite in the highest degree the advantages of yielding rich milk and forming good beasts for the butcher. As to the latter point, I believe that they will feed to a large size, and the beef is of good quality, but they are slow feeders and do not fatten early.

"Before I went to Normandy I was told that I should find that the farms were small and in the hands of peasant proprietors, with two or three cows only, which were kept for the greater part of the year in the stables, and that the dairy appliances were old-fashioned. On my

arrival I found that this applied to Brittany, where the customs are as different from those of Normandy as is the soil. The farms that I saw were portions of large estates, and the herds contained from 30 to 150 milking cows, and these were kept out night and day, winter and summer, as the farmers believe that the flavour of the milk, and consequently of the cheese, is injured by the cow lying on straw. I may remark here that it appears that our Gloucester cheese had a higher reputation when the old Gloucester breed was in vogue, and those hardy brown cows, with their black muzzles and white tails, which are now so rare, were kept in the fields all the year round.

"The Marquis de Cnsey's land was his own, but I heard that it was valued at £5 per acre. The fields were divided by high banks, with thick double rows of elms, and very deep narrow ditches on each side, kept carefully cleaned out. The cows were milked three times a day, at 4.30, 11.30 and 6. The evening milk was set, and skimmed the next morning; the cream was churned and half the skim milk was added to each of the other milkings, having been previously warmed so as to bring the whole to 86 degrees. The rennet, from M. David, rue d'Alencon, Lisieux, was added, a tablespoonful to five gallons. The safest guide is that the curd should come in five hours. The curd is ready when the dairymaid, drawing her fingers over it, finds that it does not stick. The curd was then ladled out in large pieces and put into rings 4½ in. across, and the same height, perforated at the sides. These stood on reed mats on a slight incline, and the whey soaked out through the mats on to a table of wood or slate and was carried by a gutter to a pail. As no pressure was employed, no cream came out with the whey which was therefore not set, but taken out straight for the pigs. In winter, which is the best season for this cheese, the curd put into the mould was sufficient, but in summer, when the curd contained more whey, the shrinkage was greater, and it was found necessary to add a little curd to each mould a few hours after the first had been put in.

"Every twelve hours for two days the cheeses were turned and salted. They were then taken out of the moulds and salted, and put on laths in the dairy for a day, after which they were taken to the cheese-room; here they were kept first on laths in the centre, and then on shelves at the side for three to five weeks to dry, and then they were taken to the 'cave' or cellar to ripen. The cheese-room had several rows of small pigeon-hole windows on each side, fitted with wire gauze and wooden shutters. These were placed at different heights for the purpose of regulating the draughts. The cheeses were turned every day at first, then every other day, more often in damp weather than in dry. At first they were speckled, then covered with white mould which gradually turned yellow or reddish. The latter stage was accomplished in the cellar, which had no draught or light, and felt rather damp. They continued turning them at intervals till they were sold, in winter ripe, in summer half-ripe, as they mature rapidly in hot weather.

"If we could produce the cheese, we should have only France to compete with; a formidable rival no doubt, but one whose cheese-making area is not unlimited. The long voyage from America would be fatal to Camembert, as would be the climate of Italy. The land of this part of France is exceptionally rich, but by using Jersey cows, or by extra feeding, we could produce as rich milk here. At present the Camembert cheeses that I have seen made in England have been either too new to be creamy and half liquid, like the best Camemberts, or they have been too strong, but probably this could be overcome if buildings were put up on the model of those in Normandy, and on a suitable soil and situation. There is reason to believe in the great and continued profit of this cheese from the fact that the wages of a good dairy-woman have more than doubled in the last few years. Last year I heard of £50 and all found being given to a first-class cheese-maker. Plenty of work was exacted in return."

The Editing Committee add a note stating that they "think Mr. Granville Baker was misinformed as to the statement that winter is the best season to Camembert, spring and autumn being usually considered the most successful seasons. In the process of ripening, blue mould succeeds the white."

ADULTERATION IN ISLINGTON.

Evidence of How Somerset House Chemists Encourage Fraud.

Dr. Harris, Medical Officer of Health states that last quarter 137 samples of milk were submitted for analysis, 10 of which were adulterated. Of these milks, 48 were bought on Sundays, 59 on week-days, and 30 were procured in course of transit at the Great Northern Railway Station at Finsbury Park. All of the Railway samples were pure, while 7 of those purchased on Sundays and 3 of them bought on week-days were adulterated.

The results of the analyses were as follows:—

	No. taken	Genuine	Ad'l. t'rat'd	Per cent'ge Ad'l'trat'd
Samples taken on Sundays	48	41	7	14·8
Samples taken on week-days	59	56	3	5·0
Samples taken at Finsbury Park Station...	30	30	0	0·0
	137	127	10	7·3

	No. of Samples	Solids, not fat	Fat	Total Solids
Milk procured in transit at Finsbury Park Station	30	8·70	3·82	12·52
Milks taken on Sundays	48	8·52	3·48	12·00
Milks taken on week-days	59	8·61	3·69	12·30
Somerset House Standard	—	8·50	2·75	11·25

Here it will be noticed that as usual the samples procured at the Railway Stations, as well as those purchased on week-days and on Sundays, showed an average analysis *greatly above the Standard for pure milk fixed by the Somerset House Chemists.*

Dr. F. L. Teed, public analyst, states that during the three months now terminated, your Inspectors have purchased 235 samples of Food and Drugs under the Sale of Food and Drugs Acts.

I had to report against 22 of these samples, giving a percentage of adulterated samples of 9·4.

During this quarter some cases of Oil of Juniper were tried. In one case a plea of guilty was offered. In the second case the defendant was found guilty, and in the third case the defendant appealed to Somerset House, with the result that my analysis was confirmed. In the second case I was subjected to a lengthy cross-examination, but curiously enough was not asked how I arrived at my result. Since the termination of the case a witness who appeared for the defence has thought fit to state in a sort of preface to a trade catalogue that I guessed the composition of the sample. There was, of course, no guesswork in the matter at all, and if I had been asked the question should have been quite willing to give full information.

It seems to me very discourteous, if not worse, to make grave accusations of this nature totally unsupported by the facts of the case, but having brought the matter to your notice I don't propose to take any further steps, unless you should intimate that you thought it desirable to do so.

ADULTERATION IN MANCHESTER.

THE report of the public analyst appointed for the City of Manchester, Mr. C. E. Estcourt, F.I.C., upon the articles analysed by him under the above Act during the quarter ending the 30th day of September, 1899, says the articles were:—Milk, 285; skim milk, 1; butter, 52;

lard, 6 ; bread, 8 ; beer, 8 ; coffee, 9 ; oatmeal, 4 ; flour, 4 ; tea, 5 ; cheese, 5 ; mustard, 7 ; white pepper, 15 ; ground rice, 1 ; ground ginger, 8 ; spirits, 25 ; sweets, 2 ; preserves, 3 ; golden syrup, 1 ; drugs, 10 ; demerara sugar, 2. Total samples analysed, 461. Total samples adulterated, 13.

Mr. Estcourt says the percentage of adulteration, estimated on the 285 samples of milk analysed during the quarter, was 2.1. As I have pointed out in previous reports, each percentage of adulteration prevented in our milk supply means a saving of thousands of pounds to the ratepayers. The total percentage adulteration of all the samples analysed by me during the quarter was equal to 2.8. This must be considered highly satisfactory, and indicates the efficient manner in which the Act is administered in this city. It is evident from the high rate of adulteration existing in many localities where the Act is not constantly enforced, its regular administration is the only effectual means of reducing adulteration.

ADULTERATION IN BRADFORD.

THE report of the Bradford City Analyst (Mr. F. W. Richardson, F.I.C.) states :—"During the quarter ending the 30th of September I have submitted 32 reports which have involved 616 analytical determinations, and have paid 32 visits to Corporation works. In my capacity as analyst under the Food and Drugs Act I have analysed 83 samples. Of these 6 (or 7½ per cent.) were adulterated, and 1 was of doubtful quality. Of the adulterated samples, 2 were sweet spirits of nitre seriously deficient in nitrous ether, 1 was a butter which proved to be entirely margarine, 1 was a compound liquorice powder containing a large excess of sulphur and a corresponding deficiency of the more expensive components, another was a lime-water very deficient in lime ; the remaining sample was a "chewing gum," composed of sugar and 18½ per cent. of indiarubber in such a form as to necessitate the swallowing of some of it when mastigated, a sweetmeat calculated to be injurious both to children and adults. The full list includes—Milk 27, butters 8, honey 1, sweets 3, yeasts 4, spirits 5, jams 2, peppers (various) 6, ground ginger 1, sweet nitre 4, myrrh tinctures 3, camphorated oils 6, bark tinctures 2, tea 2, lime-water 4, Seidlitz powder 1, tartaric acid 1, sal volatile 1, compound liquorice powder 1, total 83. The tartaric acid contained 2 grains of lead to the pound.

FILTHY ICE CREAM.

In his second quarterly report Dr. A. E. Harris, the energetic Medical Officer of Health for Islington, once more brings the scandalous state of the Ice Cream trade before the Health authorities. He says :

These articles are still being sold in every part of London without let or hindrance, as if no revelations respecting the conditions under which they were prepared and sold had never been made, and without likelihood of being prevented for some time, probably years, to come.

Meanwhile I would most earnestly warn all those whose health interests are given into my charge to beware of either themselves partaking or of allowing their children to partake of these commodities as sold from the itinerant barrowmen.

Since I reported on the conditions under which these creams were manufactured, and since Dr. Klein made bacteriological examination of them, other Medical Officers of Health, and other Bacteriologists have also made similar reports, which in the main agree with the reports of your officers.

Among these were the Medical Officers and Analysts of St. Pancras and Paddington. From the Annual Report of Dr. Sykes, the Medical Officer of Health of the former district, I learn that in June of last year a boy died

of septicæmia, following an irritant poison introduced into the system by eating ice cream purchased from a street vendor, and that a coroner's jury who inquired into the case called the Sanitary Authority's attention to it. Consequently eight samples were taken, four of which were examined bacteriologically, with the result that they were seen to contain organisms ranging from 120,000 to 500,000 in each cubic centimetre (equal to 16.9 minims in English measure). Nearly all the bacilli found by Dr. Klein were also present in these samples, which contained *B. coli communis*, *Streptococcus pyogenes*, *Staphylococcus pyogenes aureus*, *Staphylococcus pyogenes albus*, *B. liquidus*, *B. Liquifaciens fluorescens*, *B. ubiquitous*, *B. mesentericus vulgaris*.

The Medical Officer of Health of Paddington (Dr. Reginald Dudfield) reported that he had caused samples to be taken which had been examined bacteriologically by Dr. Foulterton. Eleven samples were obtained, three from shops and eight from barrows in the streets, together with four samples (water) from the wash-pails on the barrow. Dr. Dudfield visited the cream maker's premises, which, with one exception, were occupied by Italians. The exceptional place proved to be rented by an Englishman, and it was the only one in which any degree of that cleanliness, which is desirable for the manufacture of ices or other food was attained. He found the actual vessels to be clean, but the living-room in which the custard (the commonest make of ice) was prepared were, with one exception, dirty ; while the places where the custard was left to cool and thicken were, with one exception, in the immediate neighbourhood of drain openings, and in two instances of foul w.c.'s. In no case was the cooling mixture covered. In one instance, in Kensington, the premises were situated in a mews, and the room in which the ices were made was exposed to the inhalation of four adjacent heaps of manure and refuse. Uncovered cans of milk and cream were standing not far from the open door.

With regard to the premises occupied by the street vendors, he found that without an exception in Paddington they were situated in mews, and that in one instance horses were stabled in the same building. The stalls and coach houses were usually used for keeping the barrows, and for setting aside the mixture to cool and thicken.

Let us now see what Dr. Foulterton's examination discovered.

Sample 1.—*B. coli communis*, human hair, linen fibre, amorphous dirt.

„ 2.—Cotton particles, soot, etc.

„ 3.—Human hair, soot, linen fibres, raspberry fruit debris.

„ 4.—Amorphous dirt large quantity, linen fibre, and minute round worm.

„ 5.—Amorphous dirt, soot, animal hair, etc.

„ 6.—Sediment consisted mainly of vegetable debris.

„ 7.—A few animal epithelial cells, and strawberry fruit debris.

„ 8.—Large quantity of amorphous dirt.

„ 9.—No obvious added dirt.

„ 10.—A large straw, otherwise very little dirt.

„ 11.—Soot, otherwise very little added dirt.

Surely it is time this filthy and dangerous business was brought under proper sanitary control.

THE DUTIES OF A MEAT INSPECTOR.

SOME idea of the duties of a Meat Inspector may be gathered from the following rules, which the Public Health Committee of St. Mary, Islington have drawn up for the Meat Inspector's guidance.

1. He shall attend at the Vestry Hall daily at 9 a.m., Sundays excepted, unless he is prevented by circumstances which have arisen in the discharge of his duties.

2. He shall inspect all slaughter houses, and see that the bye-laws of the London County Council are duly carried out.

3. He shall inspect, as far as possible, every living animal intended for human food that he shall find in such slaughter house, and if it appear to him that any one of them is suffering from a disease which shall render it unfit for human food, he shall at once acquaint the butcher, or, in his absence, the man in charge of the slaughter house, with the fact, with whom he shall make arrangements for the examination of the offal and carcass after its slaughter, when, if it shall then appear to be diseased, unsound, unwholesome, or unfit for human food, he shall seize it, and at once inform the Medical Officer of Health.

4. He shall inspect such meat which he shall find in the slaughter house; and if on such inspection he shall find any of it to be diseased, unsound, unwholesome, or unfit for human food, he shall seize it, and at once inform the Medical Officer of Health.

5. He shall inspect all offal which he shall find in a slaughter house, and if he shall find any of it to be diseased, unsound, unwholesome, or unfit for food, he shall at once examine the carcass to which such offal belonged, if it be on the premises, and if removed, and if in Islington, he shall at once proceed thither and examine it, and if he shall then find any part of the carcass diseased, unsound, unwholesome, or unfit for human food, he shall seize it, and at once inform the Medical Officer of Health. But if it shall have been removed to a district outside Islington, he shall at once communicate, either by telephone, telegraph, or messenger, with the Medical Officer of Health of the district to which it has been taken.

6. He shall inspect all meat which he shall find on a butcher's premises, whether it be exposed for sale, deposited for the purpose of sale, or in course of preparation for sale, and if it shall appear to him to be diseased, unsound, unwholesome, or unfit for human food he shall seize it, and at once inform the Medical Officer of Health.

7. He shall inspect all meat which he may find in brine or pickling tubs, and if it shall appear to him to be diseased, unsound, unwholesome, or unfit for human food, he shall seize it, and at once inform the Medical Officer of Health.

8. He shall inspect all meat which he shall find on the premises of a pork butcher, meat purveyor, sausage or poloni maker, or meat pie manufacturer, or on any premises whereon meat is prepared for sale or deposited for the purpose of sale, or in course of preparation for sale, and if it shall appear to him to be diseased, unsound, unwholesome or unfit for human food, he shall seize it, and at once inform the Medical Officer of Health.

9. He shall inspect the brine in which meat is in pickle, or which is intended for pickling meat, and if it shall appear to him to be in such a state as to be unfit for its purpose, he shall draw the owner's attention to it, so that it may be destroyed.

10. Generally, he shall examine all meat which is intended for human food which is exposed for sale, or is deposited for the purpose of sale, or is in course of preparation for sale, on butchers', pork butchers', sausage makers', pie sellers', and pie makers' premises, or any other premises whereon meat is sold, deposited for the purpose of sale, or prepared for sale, and if it or any portion thereof shall then appear to be diseased, unsound, unwholesome, or unfit for human food, he shall seize it, and at once inform the Medical Officer of Health.

11. He shall inspect all poultry, game and rabbits, that may be exposed for sale or deposited for the purpose of sale, or in course of preparation for sale, on any premises, and if any of it shall appear to him to be

diseased, unsound, unwholesome, or unfit for human food, he shall seize it, and at once inform the Medical Officer of Health.

12. He shall inspect all fish exposed for sale, or deposited for the purpose of sale, or in course of preparation for sale, on any premises, and if any of it shall appear to be diseased, unsound, unwholesome, or unfit for human food, he shall seize it, and at once inform the Medical Officer of Health.

13. He shall inspect all meat, poultry, fish, and rabbits exposed for sale on the street stalls, and shall act in a similar manner towards it as if it were exposed for sale on a butcher's, poulterer's, or fishmonger's premises.

14. He shall at all times undertake such work as may be delegated to him by the Medical Officer of Health.

HOW TO FEED OUR CHILDREN.

By MRS. ADA S. BALLIN.

IN a lecture in connection with the Grocers' Exhibition, Mrs. Ballin said it might not be apparent at first sight why at the Grocers' Exhibition there should be a lecture on children's food, but the matter was one of great importance from a trade point of view. It was the grocers who had to sell the foods with which the children were supplied, and it was therefore of value to grocers to know which foods were the most suitable, and which they could most highly recommend. In point of fact, some responsibility rested with the seller of proprietary articles as to their value. The grocer might say, "All I have to attend to is whether I get a fair profit out of what I sell," but still men of business were also men of conscience, and it must be a great gratification to them to be able to know that they were selling a good and reliable article which would benefit the buyers, rather than to know that they were selling what was practically poison. She supposed it was a daily occurrence for grocers to be asked what they would recommend as the best food for children, and it would be a good thing if they had the knowledge to be able to inform the mothers. Mrs. Ballin then proceeded to deal with the proper methods of rearing infants, and mentioned the kinds of infants' food which she considered suitable. For children of a year she expressed the opinion that meat essences and jellies might be given, although care should be taken that the child was able to digest them. The subject of condensed milk she considered of great importance to the grocery trade with regard to its health aspect on children. The question had been very much discussed by physicians. It was much used amongst the poorer classes on account of its cheapness and the facility with which it was prepared, and also because it kept for a considerable length of time. In many cases, children who could not digest cow's milk would digest condensed milk. It was most important, however, to be careful as to the brand of milk, as many were worthless, and their use led to children having rickets. The man who stocked condensed milk, should be careful to see that it was whole milk, and contained the necessary quantity of cream. Oatmeal could also be given after twelve months, but ordinary Scotch oatmeal, containing rough particles, should not be given to children under eighteen months, and it was better to have the prepared oatmeal on the market. Dealing with the feeding of children at an older age, the lecturer recommended the use of such extracts as Bovril in preference to beef-tea, and thought prepared suet was better than the suet from the butchers, because it was free from skin, &c. When tinned goods were used care should be taken to turn them out at once into a glass vessel. If this was always done there would be very few cases of poisoning from tinned goods heard of. Speaking as to the use of jams, jellies, &c., Mrs. Ballin expressed surprise that there was often difficulty in obtaining raspberry and blackberry jelly from grocers. In concluding her remarks, Mrs. Ballin dealt with the natural fondness of children for sweets, and advised that chocolate

should be given them in preference to coloured sweets—that was unless the sweets were coloured with vegetable colouring.

The Chairman, in moving a vote of thanks to the lecturer, said he took it that the various proprietary articles which had been mentioned by Mrs. Ballin were merely instanced as types on the market. For instance, all good malt extracts were of use in infants' food, and all good oats were good as infants' food. Then he would say that, although separated condensed milk was strongly to be condemned for children, yet it was a very valuable food for adults. He had been analysing separated condensed milk, and found its composition almost identical with the staff of life—bread. Therefore the grocer who sold separated condensed milk could rest assured that he was selling a good food for adults, although he knew that mothers in ignorance often gave it to children. Want of fat was almost certain to produce rickets, and in separated condensed milk they had not the requisite fat.

The vote of thanks was carried with acclamation.

THE GLOUCESTER ANALYST ON PRESERVATIVES IN FOOD.

Preservatives in Milk and Cream.

The county analyst for Gloucestershire has prepared the following report:—To the County Council. At the County Council meeting held in January last, a resolution was passed directing the Chief Constable to take a large number of samples of milk and cream for analysis during the summer months, in order to ascertain to what extent preservatives were used. During the past quarter, 43 samples of milk and 18 samples of cream have been submitted to me for analysis, all of which I have examined for preservatives, with the following results. Of the 43 samples of milk, 38 did not contain any preservative, four contained small quantities of formalin, one contained salicylic acid to the extent of 20 grains per gallon. Of the 18 samples of cream, 13 did not contain any preservative, four contained formalin, and one contained boric acid to the extent of 20 grains per pint. In the case of the salicylic acid preserved sample, I suggested to Superintendent Matthews to purchase another sample a month later. The second sample did not, however, contain any preservative. The only sample of cream containing boric acid was purchased from one of the branches of a large dairy company celebrated for the purity of its goods. Of the eight samples containing formalin, the quantity present was insignificant. I think before taking any action as to prosecution, it would be advisable for the County Council to make known the character of the substances used, and to issue notices as to the best methods of preserving milk and cream for a reasonable period. There can be no doubt but that the best method of preserving the substances is to observe the greatest cleanliness in every stage of handling, and to cool the milk immediately it comes from the cow, and to keep it cool for as long a period as possible. As to the three preservatives used, salicylic acid is undoubtedly bad in such quantity as would be useful. Boric acid should only be used in small quantities, and then, unfortunately, it is of very little use. Formalin is very efficient even in small quantities, but very little is known about its effect on the process of digestion; no doubt it tends to retard it. I shall continue to watch the literature of the subject, and if any time I consider preservatives are used in such quantity as to be injurious to health, will at once notify the same to the Chief Constable. At the last County Council meeting I made the statement that the milk sold in this country was generally of good quality, and in support of this I give below the average composition of the forty samples of genuine milk:—Total solid matter, 12·2 per cent.; fat, 3·5 per cent.; non-fatty solids, 8·7 per cent."

A NEW DAIRY INVENTION.

THE Danes are notoriously experts in everything pertaining to dairy farming, and it is not surprising that it has been reserved for Mr. O. B. Wimmer, of Denmark, to invent a process for dealing with the raw material of the dairy, which should, if it proves ultimately successful in common use, entirely revolutionise the method of dealing with these products. The object of Mr. Wimmer's invention is, says *The Dairyman*, as we are informed, to treat milk, by a process we are not at liberty to disclose (as foreign patents are now being applied for), in such a manner that the whole of the food constituents will be precipitated in the form of a powder or a solid mass, the water being allowed to drain off. By the application of a proportionate amount of water to this residuum, at any future time, the milk, as fresh and wholesome as when taken from the cow and an equal quantity, will be reconstituted. The process is said to be simple and inexpensive, whilst the immense saving in transit alone should effect very great economy. The invention should prove invaluable to soldiers and explorers, and for use on board ships and should almost, if not entirely, kill the cheap and generally nasty brands of condensed milk. The idea of the inventor is to bring the milk on the market in the form of a powder or solid, and the customer can then, whenever he wishes, turn it into milk, cream, butter or cheese. The milk, in the form of a powder or solid, can be kept for years without losing any of its good properties. This has been proved by public analysis. The invention has awakened much attention in the trade, and the inventor has already entered into negotiations for selling his patent rights all over the world.

UTILIZING SUGAR REFINERY WASTE.

THE value of the wash from sugar refineries and distilleries as a fertilizer has long been pointed out, but the wash being very dilute, and becoming very viscid when concentrated, many difficulties have stood in the way of those who have sought to turn the fertilizing ingredients to account.

Last August we gave a short account of a patent referring to the treatment of molasses-wash, says the *Chemical Trade Journal*, taken out by a Mr. Wenck. Since then, we learn from the representative in this country (Mr. Wiskemann, 9, Mincing Lane, London) that the product obtained by Wenck's process has been christened "Chilinit," as it supplies nitrogen, and therefore can take the place of sodium nitrate (Chili saltpetre). As indicated in our abstract of the patent, nitrifying bacteria are cultivated in a portion of the molasses, and when teeming with the desired bacteria the liquid is mixed with sterilised powdered chalk and sand, and gently dried at a low temperature. The bulk of the molasses is concentrated in a multiple effect evaporator, and mixed with some of the bacteria preparation. In addition to the potash and nitrogen in the molasses there is a large percentage of dissolved organic substances, which afford an excellent fostering soil for micro-organisms contained in the soil, more especially for nitro-bacteria. In experiments regarding nitrification of ammonia by means of nitrifying bacteria contained in the soil, 60 per cent. of the ammonia added became nitrified after 14 days with molasses-wash of 50° Brix as a fostering soil.

Seeing that the potassium-oxide in the molasses-wash is in most cases fixed to organic acids, an indirect effect has to be expected besides the direct fertilizing action, for the phosphates of iron and of alumina are soluble in the salts of molasses-wash. Molasses-wash, therefore, acts not only as a nitrogenous and potassic fertilizer but also as a phosphatic fertilizer, the latter property being doubly valuable, seeing that phosphoric acid no longer dissolves in aerated water when it has been converted into basic phosphate of iron. As the average of a number of analyses, Chilinit may be said to contain 3 to 4 per cent. of nitrogen, 8 to 9 per cent. potash, as oxide, 30 per cent. organic matter, and 30 to 33 per cent. of caustic lime.

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Food and Sanitation.

SATURDAY, NOVEMBER 11, 1899.

CONDENSED MILK v. COW'S MILK.

The Slaughter of the Innocents.

OUR attitude upon the question of the correct labelling of Skimmed Condensed Milk has caused many doubtless well meaning but ill-informed persons to advance opinions entirely unjustifiable as to the value of Whole Condensed Milk, or Separated Condensed Milk. Thus in the House of Commons debate on the Food and Drugs Act one member of Parliament declared that skimmed condensed milk had no food value whatever, and strange to say his ignorance received the encouraging

cheers of scores of his fellow members. One wonders where the brains of some of our legislators lie! A moments thought ought to be enough to enable even the dullest M.P. to recognise that skimmed condensed milk is more healthful than the bulk of cow's milk as ordinarily sold in our large towns. This is easily proved by the present rate of infant mortality and its causation as declared by our ablest sanitarians. Birmingham's rate is 143 deaths per 1000; Manchester's slaughter of the innocents is 146 per 1000 births; Sheffield, 146; Liverpool, 142; Clerkenwell, 147; and Islington, 122 per 1000 births.

Here we have culled from all parts of the country figures terrible in their significance, and the grim lesson they teach. Let us study that lesson and get to the heart of this awful problem—Why, out of every 1000 children born into this world do 146 succumb in Manchester, and other towns yield the same results? Dr. Niven has striven earnestly, and with a whole-souled devotion to the well being of the public that we are glad to recognise animates that self-sacrificing body of public officials—the Medical Officers of Health—to get at the cause. A whole-sale examination of milk samples in Manchester showed that an enormous percentage was dangerous to the consumer.

Liverpool was in no better state. A few months ago, Dr. Hope, the Liverpool Medical Officer of Health, found it necessary to warn mothers against the increasing infant mortality.

Dr. Hope said:—"Milk is known to be a vehicle for the transmission of certain specific diseases. Scarlet fever and typhoid fever, undoubtedly, and possibly even diphtheria, may be conveyed by it; but of far greater consequence even than this, is the mischief wrought by the use of milk undergoing putrefactive changes. Without going into details as to the nature of the putrefying organisms, or how they find their way into the milk, it may be stated that the direct destruction of infant life every summer and autumn from putrefying milk foods is remarkable.

"The virulent nature which milk can assume is proved, not only by these facts, but also by the investigations by the bacteriologist; thus in investigations, undertaken for quite another purpose, it was found that some samples of milk—purchased in the ordinary way—proved so highly virulent as to kill the animals inoculated with them within 48 hours."

On the basis of careful and elaborate observations, Dr. Alex. Hill, of Downing College Lodge, arrived at the conclusion that "half of the milk supplied to the public contains the bacilli of tuberculosis." In a letter to the *Times* Dr. Alex. Hill said "The most practical of all tests, the injection of the milk beneath the skin of a guinea pig, shows that the milk supplied by three-fifths of the dairymen contains the bacillus, since it invariably produces tuberculosis. There can be little doubt that when it is given to a little child suffering from a cracked lip or

a little thrush on the mucous membrane of the mouth, its injection is effected with equal certainty. The report of the Royal Commission shows that when calves are fed upon the milk of tuberculous cows a large proportion of them contract the disease, even when they are free from any sores favourable to infection; and it is probably true that practically all the cases of tuberculosis in infants, whether of the lungs, the bowels, or the membranes of the brain, are due to infected milk." Experts further declare of milk as ordinarily sold that it is in thousands of cases drawn from dairy farms the sanitary state of which is disgraceful, where the drinking water for the cows is the pond which they foul. It may be said that the Public Health Acts can and should prevent this, but they are a farce in hundreds of places in the United Kingdom, no samples being examined bacteriologically or chemically, and cow's milk as ordinarily sold may be rank poison. Even in districts where there is existent careful sanitary control outbreaks of disease are common. For example some months ago at Paisley there was an outbreak of fever caused by milk, and the Medical Officer discovered that out of 57 cases there were 44 caused by infected milk from two farms where fever was found to exist.

Dr. A. K. Chalmers, Medical Officer of Health, Glasgow, in his annual report just issued, says that in the western district of the city, 51 cases of enteric fever occurred which were traceable to milk infection, resulting from an illness occurring in the family of a dairy employé and not recognised at the time to be enteric fever.

In addition to the dangers of fever, diarrhoea, scarlatina, and other diseases spread by milk we find that children consuming ordinary cow's milk as sold in our large towns need great vitality for they are handicapped heavily. We have forty per cent. of the cows in the United Kingdom declared by our agricultural professors to be affected with tuberculosis.

Dr. Alex. Hill, we note, asserts that half the milk sold is in this state. Next we have it adulterated in various ways, and crowning villainy of all, it is drugged by the farmer, the wholesale dealer, and once more by the retail dairyman. Take any dairy paper and what is the first thing you see? Three parts of the advertisements are those of preservatives, borax, boracic acid, formalin, etc., under various fancy names. One of our most conscientious scientists, Professor Russell says that these drugs may rightly be called the lazy or the dirty man's friend.

Another of the best informed experts, Mr. C. G. Freer Thonger, the Dairy Adviser of *Farm and Home*, thus pithily states the case:

"The true nature of such chemicals is not usually made known, although the majority of them contain boracic or salicylic acids in greater or less quantity. No one would willingly prefer to have the milk he used drugged in a such a manner, if he knew it, particularly if he was going to use it for young children, whose systems are much more sensitive toward the action of drugs than adults. The use of all such chemicals as these is prohibited by law in most countries, but not, unfortunately,

in ours. *The main reason for their use lies in the fact that they overcome the effect of slovenly habits of milk handling, for although bacteria are present in abundance through negligence, their effect is minimised, by their inability to develop in the presence of the antiseptic.*"

It is doubtful if there are more than five per cent. of the milk vendors in our large town, who do not from time to time use these drugs.

Dr. Hill, Medical Officer of Health for Birmingham, has for years striven to suppress this drugging of milk by the dairyman, and Dr. Fosbrooke (Worcestershire County Council) recently declared that he looked upon boric acid in some respects as he did upon arsenic. No milk containing boric acid should be given to children or invalids.

Dr. Robinson (Kent County Council) declares that he is convinced from personal experience of the deleterious effect of boric acid in food.

Professor McWeeney (Dublin) says that babies and persons suffering from chronic kidney disease are not able to eliminate boric and salicylic acid from milk. These are the deliberate opinions given after exhaustive examination by the ablest living authorities upon public health, by men responsible for the sanitation of Birmingham, Liverpool, Manchester, etc., and by the foremost dairy experts of the world. Truth to tell, they reveal a sorry state of affairs, and there is little wonder that child murder through ignorance is the rule to day. The mothers of England, in the main, know nothing of this, hence the appalling slaughter of the innocents, 146 per 1000 in Manchester, 143 per 1000 in Birmingham, 147 per 1000 in Clerkenwell, and so on throughout the country.

But it may well be asked, granted that all this be true, is it not within the ability of the scientist, to provide a remedy. Well, it is, but it means rigorous, efficient enforcement of public health and adulteration acts, costing perhaps a million or two more per year, and in face of this expenditure, the public conscience or ignorance, prefers that five infants out of every six born, should die from disease produced by improper feeding, by drugged milk and other causes, which are preventible. Until the millenium of perfect hygiene arrives, we see only one safe course easy and existing at our hand. Avoid ordinary cow's milk as you would a pestilence. A condensed milk is practically sterile, it is free from disease germs as disclosed by recent bacteriological examinations made at the instance of the Liverpool Health Authorities, and can therefore be relied upon as pure.

We said in our issue of July 28th, 1899, *à propos* of the House of Commons debate: "We must protest against some of the unwarranted statements made in the debate. For example, Mr. Strachey said "this stuff was merely chalk and water." This is untrue and grossly unfair to a valuable article of Commerce. Condensed skimmed milk contains a high proportion of nutriment, and if other fat were added to it to replace the butter fat abstracted, it would be little, if any, less valuable than the condensed whole milk. Its cheapness makes it a real boon for

hundreds of thousands of consumers throughout the United Kingdom. It keeps longer than new milk, it is more portable, and it is free from the risk of spreading disease. Mr. Strachey and his friends who denounce it in the way we comment on, are either very ill informed or the victims of prejudice."

How woefully they are victims our readers can judge from the foregoing facts:

It is a great pity that the utterances of persons of the Strachey M.P. type find their way into print, because they do a great deal of mischief, the prevalent belief being that if a man be a member of parliament he must have some knowledge.

The condensed milk manufacturers are doing a useful and necessary public work, and in the interests of humanity we hope to see the use of condensed milk grow. Our own enquiries show that its purity is unquestionable, the condensation secures practical sterilization, it is cheap and in every way a positive boon to the public. If it does, as it ought to do, abolish the dairyman, public health will benefit, we shall be spared the surreptitious drugging of foods by the wholesale and retail milk vendor, or by the lazy, dirty, dairy farmers, fever will visit us less often, and the slaughter of the innocents be reduced.

In condensed machine skimmed milk we have a higher percentage of flesh-forming nitrogenous matter and of cane and milk sugar than is found in ordinary full cream condensed milk. For the millions of workers who require cheap wholesome food, condensed skimmed milk may therefore be honestly recommended.

AN IMPORTANT MILK WARRANTY CASE.

ON October 6th, at Tottenham Police Court, William Bennett, of St. Ann's Road, Tottenham, was charged with selling milk containing nine per cent. of added water. Mr. Bridge prosecuted for the Middlesex County Council, being Inspector; defendant was represented by Mr. Trevor White (barrister). After prosecution was opened and evidence heard as to purchase, etc. Mr. White: How many times have you summoned Mr. Bennett? Mr. Bridge: About four. Mr. White: And he has always had a warranty? Mr. Bridge: Yes. Mr. Bennett was called and said the milk was sent by John Taylor, of Shenby, Herts, and was to be delivered either at St. Pancras or St. Ann's Station, and it usually arrived at about eight in the evening, but was not sent for until five next morning, and it was in unlocked churns. I saw the contract signed by Taylor and his sample has been analysed by my analyst, who will give evidence. I instructed my solicitor to give notice of warranty. I handed the bottle to Mr. Riches, of Kingsland Road, for analysis. J. Richardson, foreman to Bennett, said I fetched the milk from the Station and handed it to Mr. Bennett, who measured it. John Cornueilly said I measured up the milk. Bennett was not there. He was in his office. W. B. Adams said I work for Mr. Bennett and received this milk on 2nd September to sell to my customers. I sold some to Mr. Bridge, but he did not tell me it was for analysis. I had been told he was about and gave the sample to Connelling. Mr. Riches called and said I analysed a sealed bottle of milk on September 8th, and it was then fresh. My assistant gave the bottle to me. It was marked E. M. 178. Mr. Bridge: Did you notice the seal? Mr. Riches: I did not. Mr. Bridge: What are your figures? Mr. Riches: Fat 2.21,

solids not fat 9.22, and I did not detect any added water. Mr. Bridge: What standard of fat do you take. Mr. Riches: The Somerset House standard viz.: 2.5 of fat. Mr. Bridge: From the figures given by you would you say the milk was a genuine example. Mr. Riches: I should call this a poor milk, but would not say it was adulterated. Mr. Bridge: You keep a chemist shop? Mr. Riches: No, I am a major graduate in pharmacy, my shop is a pharmacy. Mr. Bridge: What process of analysis do you use. Mr. Riches: A modified Wanklyn process. Mr. Bridge: Can you tell me how much fat this milk is short of judged from your 2.5 standard. Mr. Riches did not answer. Mr. Bridge here pointed out the Railway Company were not common carriers of milk, that is they only carry it by special arrangement. Their duty to the consignor ceases as soon as the milk is dumped down at St. Ann's, hence the milk is from this point in Bennett's hands, and he must prove non-access of other parties. The Bench said there is a serious divergence of opinion of the analysts. What say you Mr. Bridge. Mr. Bridge: It is in the discretion of the Court to send, upon application by either side, the third portion to Somerset House. I apply for this to be done. Mr. Latham: Then the case is adjourned to November 2nd, and the defendant may then prove non-access at the Railway Station. Mr. White said I have only to prove a handing over of the goods, and this includes the attendant liabilities, and delivery must take place to effect this. In fact delivery was effected at St. Ann's Station, and the contract completed. Mr. Latham (chairman) said we have carefully considered this case, and though Bennett has proved that his servants have not tampered with the milk, yet he has failed to prove that he sold it in the same state as when he purchased it. We therefore fine him a nominal penalty of 1s, together with costs of analysis, £1 1s., and costs of Court. We also find that the County Analyst (Mr. Bevan) and Somerset House practically corroborate each other. Somerset House say: "We are of opinion that the sample contains *not less than* seven per cent. of added water, i.e.: Solids not fat, 7.84; fat, 3.65; 11.49. The case occupied some six hours in hearing. The puzzle seems to be how the pharmacist obtained his figures of 2.21 fat and 9.22 solids not fat.

AT Uffington, on November 1st, before Mr. N. C. A. Neville, Stipendiary, at the Wolverhampton Police Court, Peter Brisbourne, farmer, of Uffington, was summoned for giving a false warranty in respect of a churn of milk supplied to the Midland Dairy Company, at West Bromwich. The case arose out of proceedings taken against the Midland Dairy Co. Mr. Caddick, jun., West Bromwich, prosecuted, and Mr. Carrane, Wellington, defended. Mr. Caddick said defendant was under a contract to supply milk to the Midland Dairy Co., and it was a clause in the contract that a warranty should be given with every churn of milk. Proceedings had been taken in connection with a sample which was obtained from the Midland Dairy Company's churn, at a shop in High Street, West Bromwich. Evidence was called to show that a sample of milk was taken from this shop and analysed. The analysis proved the milk to be deficient of twelve per cent. of its natural fat. Mr. Carrane, in cross-examination, suggested that the sample of milk taken might have been tampered with before it was analysed. He contended that the milk was up to the proper standard when it left Upton Magna Station. Defendant, in his evidence, admitted that what they called the strippings was the richer milk, and that was not mixed with the other milk. The Stipendiary said that explained the weak milk. Defendant was fined 40s and costs, total £5 9s.

ESTHER ANN BURT, dairy keeper, of Newquay, was summoned for having sold to Superintendent Bassett, milk adulterated with 15 per cent. of water. Superintendent Bassett said he was an inspector under the Foods and Drugs Act, and when the defendant sold him the milk she said she could not be answerable for it, as it was not from her own cow, she having just purchased it from Mr.

Tummon. He thereupon went to William Tummon's dairy, and took a sample from the pan from which the defendant had been supplied. The two samples were subsequently sent to Mr. Burt, the county analyst, who certified that the milk supplied by the defendant contained 15 per cent. of water, and that the milk supplied by Tummon was genuine. Corroborative evidence was given Sergeant Vincent. Defendant stated that on the date named she purchased milk from five different people. Fined £1 10s., including costs.—John Reynolds, Newquay, was summoned for selling milk adulterated with water. Superintendent Bassett said a sample of milk obtained from defendant's servant was certified by Mr. Benedict Kitto as adulterated with eight per cent. of water. The defendant, who did not appear, wrote stating that he was unaware that water had been added to the milk. Fined 19s. 6d., including costs. Superintendent Bassett said he had taken ten samples of milk at Newquay, of which five were genuine and five adulterated.

At Leeds, on November 3rd, George Green, of the Foundry Mill Farm, Seacroft, Leeds, was summoned at the instance of Mr. Walker, the inspector of Foods and Drugs in the city, for selling milk which had been certified to contain thirteen per cent. of added water. Mr. C. C. Jolliffe, the Deputy Town Clerk, prosecuted, and Mr. H. A. Child represented the defendant. It appeared that defendant habitually supplied retail dealers with milk, and that two of his customers had been fined for selling adulterated milk. Inspector Walker accordingly watched his cart, driven by his son, and when milk had been delivered took samples which were submitted to Mr. Fairley, the city analyst, with the result stated. For the defendant, Mr. Child did not deny the facts of the analysis, but pointed out that his client had been in the business for twenty-five years without previous complaint. He also called as a witness Green's son, who said that on the day in question he had fallen short of milk and had been compelled to buy some from other dealers in order to supply his customers. That was to a large extent the milk in the can from which the samples were taken. A fine of £10 and costs was imposed.

BUTTER.

JABEZ SWANNELL, grocer, now of Pump Street, formerly of 5, Mealcheapen Street, was summoned for selling adulterated butter, the allegation being that it contained 79 per cent. of foreign fat, and, further, with not labelling margarine. Mr. S. Southall was for the prosecution, and Mr. W. W. A. Tree for the defence. Mr. Southall explained that the Assistant Inspector (Mr. Shepherd) made a purchase of sixpennyworth of butter from Mr. Swannell's assistant, but not until Mr. Shepherd announced that he was going to send a sample to the Public Analyst did the defendant and the assistant explain that a "mistake had been made" and that margarine had been sold. Mr. Southall said it was easy to offer that defence when one was caught doing wrong. It was a very plausible tale, but the method had the effect of defrauding the public. If the purchaser had been a private individual, would the defendant have gone to repay him part of the money he had paid? Mr. Shepherd gave evidence accordingly. He did not notice disorder in the shop, and he did not know that the defendant was changing premises. The analytical certificate of Mr. Cecil Duncan was put in; and Mr. Tree, replying on the case, said that this was a waste of official energy, because the defendant had not denied that the material was margarine. The Magistrates' Clerk: If the certificate had not been put in you would have said that the case was not proved. Mr. Tree argued that it would have been better if the case had never been instituted. The case arose out of a pure accident and mistake on the part of the assistant, the goods being in confusion because of the intended removal on the following day. He submitted that the purchaser was not prejudiced, because he was informed before he left the shop, and the offence was

therefore technical. Mr. Swannell had traded honourably in the city for 27 years. Defendant said his newly engaged assistant, Frederick Barnett, had been in the provision business and not the grocery business, and had not sold butter before. Barnett corroborated him. The Bench decided to convict. In view of the extenuating circumstances, instead of the usual penalty of the Court (£2), they imposed a fine of 10s. and costs in each case.

At Wigan, Michael Whyte, of 66, Scholes, was summoned under the Food and Drugs Act for selling a substance as butter to the prejudice of the purchaser. The Town Clerk (Mr. J. J. Charnock) prosecuted, and Mr. W. Lees defended. The Town Clerk said Mr. John Sumner, the Chief Sanitary Inspector, visited the Market to purchase samples of goods under the Food and Drugs Act. He went to the defendant's stand on the Market, and purchased a pound of butter, and tendered a 2s. piece, receiving 1s. 2d. change. He informed the defendant's wife the butter was for the purpose of analysis, and divided the article into three parts, as required by the Act. One of them was submitted to the Public Analyst, and his analysis showed that it contained fats foreign to butter, and not more than ten per cent. of pure butter. Mr. Sumner bore out Mr. Charnock's statement, and said that after he bought the sample he went with defendant's assistant to the market office, and there divided it, giving one part to the assistant. By Mr. Lees: He sent the sample to the analyst by one of his assistants. The butter he bought was obtained from a piece which Mrs. Whyte at first said was sold. Mr. Lees objected to the certificate put in from the analyst, as it stated the sample was received from Mr. Sumner. The latter witness said he sent it by one of his assistants. Mr. Justice Hawkins and Mr. Justice Wills stated that it was important that the statement as to who it was physically received from should be made. He also objected to the certificate on the ground that it was not within the meaning of the Act of Parliament. It said the sample contained not more than ten per cent. of pure butter, but did not give the ingredients, which it ought to do, so as to allow the magistrates to form an opinion upon it. The Town Clerk contended that the certificate was good, and quoted a case in support. The Mayor said he was afraid the objection was fatal. To his mind the certificate was hardly a satisfactory one. Similar ones had been received in other cases because there had been no objection to them. The form of the certificate was right, but the proper particulars had not been filled in. The case would be dismissed. Mr. Lees asked for costs in the case. Defendant had been put to a lot of trouble and annoyance. The Mayor said he thought Mr. Lees ought not to ask for costs because his client had got off on a technical objection. There were two other cases against defendant in connection with the Food and Drugs Act, and the Town Clerk asked for these to be adjourned. Mr. Lees objected. The cases had been pending for some time, and the very same point arose in them. If they were adjourned he asked for the costs of the adjournment. The Mayor said the cases would be adjourned, but the Town Clerk must pay the costs. The Town Clerk: In that event I shall not ask for an adjournment. If you are going to saddle me with costs I will withdraw the summonses. The cases were thereupon withdrawn. Mr. Lees pressed for costs, but the magistrates would not grant them.

At Gateshead, on October 30th, Joanna Dent was charged with having sold adulterated butter. Inspector Jones stated that he sent an assistant into defendant's shop for a pound of butter, for which the price charged was 1s. 4d. It was found to be margarine. Defendant stated that she was not aware it was margarine she was selling. She bought it for butter, and paid the price of butter for it. She bought it from Mr. Dickinson, of the Bee Hive Stores. In reply to the magistrate's clerk she said she did not know that she should have a warranty. The Mayor said they were bound to inflict a fine, but at the same time were sorry for defendant. She must pay 20s.

THOMAS MULLOY, 17, Toad Street, Radcliffe, was summoned on October 30th, by Superintendent Nobbett, who stated that two samples of butter were taken at defendant's shop. In each case the purchaser asked for a pound of butter and paid 1s. for it. The samples were reported to be margarine. The cases were very bad, and in his opinion the public had been badly defrauded. It had been ascertained that during one hour no fewer than 113 customers had entered the shop, and persons had to stand in the street while waiting their turn to be served, the shop being so crowded. That being the state of the case, the magistrates could judge what profit had been made by the defendant. Not only had the defendant defrauded poor work-people, but he had undermined the trade of honest local tradesmen. The defendant had placed the article behind a screen in the shop. No fewer than ten cases of margarine, covered with sacking, were being conveyed to defendant's shop on September 25th. Evidence was given by Police Constables Metcalf and Nesbitt, Police Serjeant Wilcox, and Mr. W. Johnson. Mr. Pickstone, for the defence, contended that the defendant had acted in ignorance. The defendant, while pleading guilty to both the offences, desired it to be stated that he had lived in America for twenty-four years, where they were not governed by the same laws as the English grocers were. He had since kept a small farm in Ireland, and came from there to keep the shop in Radcliffe. The defendant had gone away and left his wife to face the matter, and if any fine were inflicted upon the defendant it would have to be paid by her. Mrs. Mulloy denied that any Manchester firm was "behind them." The screen had been put up in the shop with the intention of keeping dust away from the butter. Superintendent Noblett stated that he suspected the defendant first through a complaint he received from the clerk to the Radcliffe District Council. The Chairman said the magistrates considered that the case had been proved, and that it was a very bad one indeed. The defendant would be fined £20 and costs in each of the two cases.

At Salford, on November 1st, W. J. Porter, wholesale and retail grocer and provision dealer, carrying on business at 270, Regent Road, was charged with selling margarine as butter, and also for selling unlabelled margarine. Inspector Crossley, in the course of his evidence, stated that in consequence of having purchased from Mrs. Elizabeth Bell, a small shopkeeper at 65, West Worsley Street, two samples of what was sold as butter, which, on being analysed, proved to be margarine, he ascertained that she was being supplied by the defendant, who represented that it was butter. Mrs. Bell paid him 10d. per lb. for it wholesale. In proof of this she produced two invoices, in both of which the article was described as butter. He watched the shop, and on September 22nd, saw Porter's assistant delivering goods. Amongst the articles was a parcel of 6 lbs. of so-called butter. He purchased $\frac{3}{4}$ lb., for which he paid 9d. The sample was analysed, and it was found to contain 58 per cent. of foreign fat. The defendant said his shopman had made a mistake in sending Mrs. Bell margarine for butter. Robert Gordon, the shopman, for the defence said Mrs. Bell on the first occasion went into the shop and said as butter was too dear she would take 6 lbs. of 10d. margarine. Mrs. Bell: Oh, I never did. I always ordered butter, and did not know that I was being served with margarine, until the Inspector told me it had been examined, and found to be margarine. I sold it as butter, and thought it was butter. The Stipendiary magistrate observed that the defendant's assistant had either been very careless or wilfully dishonest. He did not believe there was one case in a hundred where an assistant did this sort of thing on his own responsibility, and even if he did the employer was liable for the conduct of his servants. The fraud, in this case, was most deliberate, for on every invoice the margarine was put down as "butter." As the defendant had not been previously convicted, he would impose a penalty of 40s. and costs, and 1s. and costs for selling margarine to the

inspector without being labelled.—Ann Newsham, provision dealer, 109, Phoebe Street, Regent Road, was fined 1s. and costs for exposing for sale margarine to which no label was attached.

JAMES McGRATH, 131, Derby Street, Bolton, was fined £10 and costs on November 2nd. The Deputy Town Clerk prosecuted, and it was stated that a pound of butter was bought and the sample was found to contain 50 per cent. of fats foreign to butter. A sum of 9d. was paid for it. The Deputy Town Clerk stated that the establishment had given previous trouble to the authorities, and fines had been inflicted already.

At Mansfield Petty Sessions, Daniel Connell, of Kirkby, was summoned, at the instance of Colonel Storey, for an offence under the Foods and Drugs Act. Colonel Storey stated that on the 9th of October he went to the defendant's shop and purchased half a pound of what the defendant purported to be butter. Complainant had it analysed, and the official report was as follows:—"Margarine 100 per cent., butter none." The defence was to the effect that the margarine was sold to Colonel Storey by mistake. Besides his grocery business, the defendant also sold confectionery, and used margarine in its manufacture. He gave up the confectionery business, however, and had a quantity of margarine left on his hands, and it was a portion of this that Colonel Storey was served with. The magistrates imposed a fine of £2 2s., including costs.

At North London Police Court on November 3rd, George H. Eggett, buttermilk, Median Road, Clapton, N.E., was summoned for selling butter adulterated with 32 per cent. of foreign fat. The defendant said that the article was the best margarine, and cost him 10d. per pound. He was obliged to sell it because his customers demanded a shilling butter, and he could not sell a pure butter at that price. When he told customers that they went away, but they were quite satisfied with the margarine. Mr. Fordham: How long has this been going on? For three weeks. I am very sorry if I have done wrong. Mr. Fordham: You have done very wrong indeed, and will now have to pay a fine of £10, with 12s. 6d. costs, or one month—Thomas Askett, provision merchant, Chatsworth Road, was also summoned for selling butter which contained 84 per cent. of foreign fat. He said it was a mistake, and that he paid 9d. a pound for the margarine. Mr. Fordham said that to sell margarine as butter was a cruel fraud on poor people. Defendant would have to pay £10, with 12s. 6d. costs.

THE FARCE OF A BUTTER WARRANTY.

At Manchester, on Wednesday, R. & E. S. Miller, wholesale grocers, Bentinek Street, Ashton-under-Lyne, and Hilton Avenue, Fennel Street, Manchester, were summoned under Section 37 of the Food and Drugs Act for having given a false warranty in respect to a firkin of Irish salt butter. Mr. Rook said that a fortnight ago, Maria Leigh, grocer, 104, Church Street, Newton Heath, was charged with selling butter containing 24 per cent. of water. Mrs. Leigh said the butter was sold to her by the defendants; she produced her invoice, on which were the words, "Warranted pure butter." The magistrates held that the warranty was sufficient, and dismissed the case, at the same time granting a summons against Messrs. Miller. Since that summons had been served the defendant's had given him notice that they were going to rely on a warranty given to them. Since the decision in the Court of Queen's Bench in the case of Derbyshire and Houlston, the former being a Manchester butter merchant and the latter an inspector for Manchester under the Food and Drugs Act, it had been almost impossible to get a conviction for giving a false warranty, but it was considered desirable that the defendants should be summoned in order that they might give proof of having satisfied themselves that the warranty they held was a genuine one. He (Mr. Rook) regretted that the new Food and Drugs Act, which would come into

force on January 1st next, did not go much further than the old one, although efforts were made—unsuccessful, he was sorry to say—to get the new law so framed as to meet a case like the present one. Evidence was then given by Inspector Honliston of the purchase of the sample; by Mr. Estcourt, the analyst, that it contained 24 per cent. of water; and by Mrs. Leigh, that she purchased the butter from the defendants under a warranty. Robert Miller, one of the defendants, said the butter in question was purchased from Grant & Co., butter merchants, Hanging-ditch, Manchester; and he produced the invoice on which were stamped the words: "Guaranteed Pure Butter.—R. C. Grant & Co." Mr. Rook: Have you taken any steps at all to ascertain the genuineness of this warranty? No; we looked upon it as being genuine. We get similar warranties from Denmark and Sweden, and we take all of them to be genuine.—Have you tested the butter to see whether it was pure? No; it is difficult to ascertain the percentage of water in butter, especially Irish salt butter such as this. I am told by analysts that butters which appear to be the driest generally contain most water. Mr. Headlam, the stipendiary magistrate, dismissed the summons, but told the defendants they had better be careful as to where they got their butter from in future. Mr. Rook: It would be no use carrying the case any further, as the Act of Parliament is a perfect nullity.

WATER AT SPIRIT PRICE.

A SINGULAR defence was raised on October 27th at the Kesteven Petty Sessions at Lincoln, to a summons charging John Case, landlord of the Strugglers Inn, Eagle, with selling adulterated whisky. Superintendent Clark and Police-constable Ford on the 24th September bought a pint of whisky from Mrs. Case for analysis. The bottles, however, were somewhat negligently placed near a fire, and two were soon cracked by the heat. Consequently two other bottles were washed out by Mrs. Case, and the whisky transferred to these. The analyst now forwarded a certificate that the sample sent him was 29·66 degs. under proof, or 4·66 degs. below the prescribed limit. The defendant admitted these facts, but pleaded that when the whisky was transferred to the second bottles, they had only just been washed out, and, therefore, there would be sufficient water clinging to the glass to adulterate the whisky. The magistrates, after a long argument, ordered the Superintendent's sample to be analysed, and adjourned the case for this to be done.

At Newport, Mr. T. E. Sergeant, Inspector to the Monmouthshire County Council under the Food and Drugs Act, went with his assistant on the 18th September to the Eagle Inn, Crosskeys, and after partaking of refreshments purchased a shilling's worth of whisky, which he informed the landlady's son he intended to have analysed. It was found to be 38·84 degrees under proof, and as the status allows only 25 degrees there was a deficiency of 13·84 degrees. This was the offence, namely, of selling adulterated whisky for which the landlady, Mrs. Eliza Jones, was summoned at the County Police Court. Mr. Lyndon Moor, for the defence, said that there were two notices exhibited in the house, but none in the particular room where the inspector made the purchase. The landlady was ill and her son mixed the spirits, and proved himself rather too liberal with the water. Mr. E. Lewis: They do not suffer from a short water supply in that district? Mr. Moore: I cannot say, your Worship. The Bench decreed a penalty of 20s.

At Kensington Petty Sessions, Messrs. Mainprice and Lord, 111, Talbot Road, were summoned for selling brandy diluted to the extent of 32·08. Inspector Hawkins said he went into the defendant's shop and asked for half-a-crown bottle of brandy. The Chairman said this was a very low price to pay for brandy. The Inspector said there was plenty of it about; the article was exhibited in the window. Mr. Maitland, who defended, said the public were not

misled in the case because there had been no indication of strength at all. The Chairman thought that perhaps made the case worse. The defendants were fined £5, with 10s. 6d. costs.

DILUTED STOUT.

WILLIAM SHARMAN, landlord of the Old King's Head, Short's Garden, London, W.C., appeared at Bow Street to a summons charging him with selling stout diluted to the extent of 5·8 gallons in a 36 gallon cask. Mr. Ware, who defended, said defendant had been incapacitated from business by a kick from a horse, and while he was laid up his cellarman added a quantity of porter to the stout. The man had been discharged. Sir F. Lushington said that in the circumstances he would only impose a penalty of £15, and £4 4s. costs.

ADULTERATED CAMPHORATED OIL.

At West Bromwich, on October 30th, Arthur Roberts, general dealer, of Temple Street, West Bromwich, was charged with selling adulterated camphorated oil. A sample was taken by Mr. Turner (Assistant Inspector), and was found to be 40 per cent. deficient in olive oil. Defendant was fined £4 12s. 6d., including costs.

ALLEGED REFUSAL TO SELL FOR ANALYSIS.

At Oldham, on October 27th, the Deputy Town Clerk applied for a summons against a shopkeeper for larceny. He said that some butter had been sold to a purchaser, when, on seeing the Inspector under the Food and Drugs Act, the shopkeeper took it away and threw it behind the counter. The Magistrates' Clerk held that there was no intention of stealing, and that the butter was only taken to prevent a prosecution. The Magistrates refused the application, though Mr. Hallsworth said similar summonses had been granted in Bolton. The Magistrates' Clerk: You can go to the Queen's Bench and apply for a mandamus.

THE BIRKENHEAD ARBITRATION CASE.

MR. W. F. TAYLOR, Q.C., the arbitrator in a claim made by Messrs. Poels, Brewster, Ramsden and Duckham, wholesale butchers, of Liverpool and London, against the Corporation of Birkenhead, has issued his award. The case originated in the Birkenhead Police Court, the firm above-mentioned having been summoned by the Corporation for exposing for sale in the Woodside lairages a carcase of beef which was seized by the authorities and condemned as unfit for human food on the ground that it was said to be affected by tuberculosis. The Magistrates dismissed the summons, and thereafter Messrs. Poels, Brewster, Ramsden and Duckham claimed damages and compensation from the Corporation for the wrongful seizure of the carcase in question. After a good deal of correspondence the claim, by mutual arrangement, was referred to arbitration, and Mr. Taylor, Q.C., sat for nearly a week at Birkenhead, and heard a large body of expert and practical evidence as to the danger or otherwise of people eating tuberculous meat. The witnesses for the Corporation all declared that the officials were justified in seizing the carcase in dispute, while those called on behalf of the claimants were unanimous in stating that it was a good sound body of beef, and that the traces of tuberculosis which were found in some of the organs were so slight that it did not affect the meat or render it in the least degree dangerous as human food. We have now the satisfaction of announcing that Mr. Taylor has decided in favour of Messrs. Poels, Brewster, Ramsden and Duckham on all the findings, and has awarded them £97 5s. 8d. of damages. He also finds the Corporation liable for the costs of the arbitration proceedings and of the award. Mr. William Madden, barrister (instructed by Mr. William

Rudd), appeared for the claimants, and Mr. Collingwood Hope, barrister (instructed by Mr. A. Gill, the Town clerk), was counsel for the Corporation.

TINNED MEAT POISONING CASE AT SHEFFIELD.

THE inquest on the body of Walter Hancock, the three year old son of Harriett Hancock, one of the victims of the case of sensational poisoning that occurred in Sheffield a few weeks ago, was resumed at the Royal Infirmary, on November 2nd, by the City Coroner, Mr. D. Wightman.—Mr. A. Neal and Mr. Manning (Messrs. Webster and Styling) watched the proceedings on behalf of interested parties.

The only witness called was Dr. Robertson, Medical Officer of Health, who had prepared his evidence in writing. This was read by the Coroner as follows: "The fact that several cases of poisoning were being admitted to the Royal Infirmary was reported to me about 5 p.m. on October 11th by Dr. Barker. I at once proceeded to have an inquiry made with a view, if possible, of checking any further spread, and found that there was no doubt as to the accuracy of the conclusion to which Dr. Barker had already arrived, that the poisoning was due in all the cases to the consumption of tinned beef. Mr. Sharman, the vendor, appeared to be anxious to give all the information he could. At the time of my visit, his wife was very ill, and I could not get information from her as to the meat. I obtained the tin which contained about 3 lbs. of beef. The meat was in two lumps, a large one and a small one. It did not present any very markedly unusual appearance or odour. On a more careful examination it was noticed that the usual portions of firm jelly, which appear on the surface of such tinned beef, was absent. The meat was slightly softer than usual, and could easily have been cut into slices. Both meat and tin had a faint sweetish but not unpleasant smell, not the usual smell of tinned beef. To any person not specially put on his guard, the beef as I received it would have seemed to be quite passable. The tin was in a fresh and good condition. It had been opened at the wrong end. In my opinion it was not a "blown" tin and in this opinion I have been supported by the part of the bacteriological examination I have already made. There was a small quantity of semi-liquid jelly in the tin. Several varieties of micro-organisms were found in the meat."

The Coroner: You say several micro-organisms. How many did you find?

Dr. Robertson: There were nine altogether.

He continued to read the remainder of the evidence:—"Some of these are organisms which are everywhere present. Among the others present I have already been able to identify the bacillus enteritidis of Gartner, which has been found in other cases to give rise to meat poisoning with similar symptoms. It is an organism very poisonous to man. Several of the organisms may have played a part in producing the poison in the meat. Taking into consideration the short interval which elapsed between the opening of the tin and the onset of the illness in the first case, it is almost certain that the infection of the meat had taken place before the tin had been opened by Mr. Sharman. I am not able to say how, or at what time, the meat became infected. Micro-organisms grow very rapidly in such cases, as the meat acts as a very nourishing and suitable food for them. In their growth on meat many organisms produce most virulent poisons popularly known as 'Ptomaines.' A person eating meat saturated with such poison is liable to suffer, the amount of suffering being dependent on (1) the amount eaten, (2) the susceptibility of the person, (3) the remedial remedies voluntarily or involuntarily taken, and (4) the nature of the poison. Usually when a tin becomes infected it is with some of the common putrefaction—micro-organism which produce

rotteness—a stinking odour and a certain amount of gas, which causes the tin to bulge—technically known as 'blown.' The symptoms described to me by Dr. Barker and others are typical of one of the varieties of ptomaine poisoning."

After his evidence had been read, Dr. Robertson said that in his opinion the death of the child had been caused by ptomaine poisoning.

The Coroner: Can you hazard any opinion as to the condition of the meat at the time that it was put into the tin. May it have been good and sound?

Dr. Robertson: I should say it probably was.

The Coroner: May this poison have arisen out of the meat or gravy coming in contact with the tin.

Dr. Robertson: I could not say that. In soldering up these tins one very minute space may have been left, one not apparent to the naked eye. Or some imperfect joint may have become loose.

Would not that cause a leakage in the tin.—There is nothing to leak out.

You believe this man Sharman may have sold it, reasonably believing it fit for sale?—Yes, I think I should have sold it myself if I had been in his position.

A Juryman: Do you think it is dangerous to eat corned beef?

Dr. Robertson: No. Certainly not.

The Coroner: My word, if it is I think it will beat the Boers and will kill more than the Boers will.

A Juryman: But the doctor says that the poison arising is dangerous.

The Coroner: He says it is a deadly poison in certain cases.

Mr. Neal: And this is the first case out of millions of tins.

The Coroner asked Dr. Robertson if he could throw any more light on it for the jury and himself?

Dr. Robertson: No, Sir. I think I may point out, with regard to micro-organisms generally, that if you put about 10,000 of them in a row they would only measure about an inch. It requires the highest-power microscope to discover them, and they would get into crevices not apparent to the eye. I don't think it is necessary to go over every tin with a powerful microscope.

The Coroner: It certainly justifies Dr. Barker in saying he could not see any of the micro-organisms with the naked eye if 10,000 of them would only measure an inch.

Dr. Robertson: When I say 10,000 of them would measure an inch I mean placing them lengthwise.

The Coroner told the jury he thought they had better return a verdict in accordance with the medical evidence. He would not advise them to add anything to their verdict.

The jury returned a verdict of "Death from ptomaine poisoning, caused by tinned beef."

THE ADULTERATION OF TEA.

Local Government Board's Annual Report.

THE twenty-eighth annual report of the Local Government Board shows that the Commissioners of Customs during the year had examinations made by their analyst under the 30th Section of the Sale of Food and Drugs Act, 1875, of imported teas before they are taken out of bond. The report of Mr. W. Cobden Samuel, tea analyst, is as follows of the 938 samples analysed:—

- 70 samples green tea faced.
- 20 samples green tea unfaced.
- 46 samples green tea capers.
- 595 samples of black tea congon.
- 160 samples of black tea dust.
- 47 samples of black tea siftings.

Of the total 854 were on analysis considered satisfactory, and the importations represented by them were accordingly delivered on the certificate of the analyst.

The remaining 84 samples represented teas of doubtful character, the results of analysis of which were reported to the Board for their decision. The whole of these representing 1,603 packages were restricted to exportation or for manufacture of caffeine.

"In regard to samples of tea examined by public analysts we stated in our annual report for 1896-97 that of the 4,289 samples examined in the previous ten years, only four had been reported against. In 1897 one sample was condemned, but during the past year out of 486 samples taken, as many as 15 were adulterated, while eight more were returned as of inferior quality. Many of these were of the variety known as caper tea, and were reported to contain excessive quantities of mineral matter. Respecting this revival of an old and somewhat ingenious method of adulteration, which consists of the addition of stones and sand to tea in order to increase its weight, the analyst for the County of Derby writes: "The practice is defended by interested persons, on the ground that the mineral matter is unavoidably introduced during the process of the preparation of the tea for the market; this contention, however, cannot be sustained, as genuine tea practically never contains 1 per cent. of mineral matter in the form of sand. Where sand and stones are present in the proportion found in the samples under observation, these foreign substances must have been purposely introduced, and possibly caper tea is chosen as the chief medium for the operation because the shape of the leaf—after its preparation for sale—is favourable for the concealment of the stones. The tea certified by me to contain 4 per cent. of sand and stones was sold at the high price of 3s. 8d. per pound, and the adulteration which was actually in the excess of the amount certified by me was obviously of a fairly remunerative character."

Legal proceedings were taken in five instances of tea adulteration, and two fines were inflicted.

SHORT WEIGHT SWINDLES ON GROCERS.

MANCHESTER grocers last week considered the question of short weights in goods. A Mr. Redfearn said a gentleman had shown him a long list of short weights in lard. Mr. Jones: That is just what we want. We want names of firms, brands, and the amount of shortages, so as to have data to work upon. As to canned goods, we are waiting for the result of a meeting of packers on the other side. Mr. Redfearn said a gentleman from Halifax had informed him that he had tested twenty-five firkins of lard, and they averaged from 4 lbs. to 5 lbs. short weight. Mr. Perkins said when this question of shortages was in agitation some four or five years ago there was some improvement, but now it had fallen back into the "old rut" in regard to hams, lard, bacon, and cheese. Councillor Regan: Only this morning I was told by a gentleman that he found 2 cwts. of lard 6½ lbs. short weight. Mr. Redfearn said it must not be taken for granted that all brands were short weight. He had had a large pack of corned beef, and was glad to say it came out all right.

HERTS COUNTY COUNCIL AND ADULTERATION.

THE quarterly report of Mr. A. E. Ekins, the analyst was as follows:—During the quarter ended 30th September, 1899, 50 samples of food and drugs were submitted to me by your inspectors, as follows:—Thirty-two samples of new milk, 9 samples of butter, 4 samples of Demerara sugar, two samples of Scotch whisky, one sample of coffee, one sample of skim milk, one sample of ground ginger. Of these, eight samples were adulterated. Considering the importance of having good milk for children and invalids, I am sorry to find so large a percentage of the samples of milk submitted to me adulterated. Seven samples of milk were adulterated and one sample of butter. In every case prosecuted fines were inflicted, a testimony to the analyst and the prosecuting officials.

MILKING TWICE v. THREE TIMES PER DAY.

It is now a well-established fact that the milk yielded by cows in the morning is almost invariably poorer in butter fat than that yielded by the same cows in the afternoon. In some experiments conducted by Sir Charles Cameron at the Model Farm, at Galsnevin last year he found that while the average percentage of butter fats in the milk given by a certain number of cows in the morning amounted to 2.9, the milk obtained from the same cows in the afternoon gave an average of over 4 per cent. of butter fat. The natural conclusion to be drawn from this circumstance is that the more frequently cows are milked the better will be the results obtained, and this has been found to be the case. Some time ago an experiment was conducted at the Ontario Agricultural College with the object of testing the effects of milking certain cows two or three times per day, and it was there found that in every case the best result attended the more frequent milking. It was found, however, that the gain over a period of a month was not sufficient to justify the increased expense attendant upon milking oftener than twice a day.

ASSISTING BEES TO MAKE HONEY.

SO ADVANCED are we nowadays in the matter of machinery, that even the bees are assisted to make their honey. This has been illustrated during the Grocers' Exhibition at the Royal Agricultural Hall, where there has been a special department devoted to honey. It seems that the industrious insects are now always kept in hives so constructed that the honeycomb is produced in square sections. Delicate mechanism is employed to shave off closely the fine wax which seals the ends of the cells, and further to extract the liquid sweet, leaving intact each tiny octagonal chamber. These are returned to the hive, whose inmates soon refill them, the benefit being that the honey is more quickly made than the wax. The new method is distinctly more cleanly than the old-fashioned means resorted to by cottagers of crushing the comb and draining the material through coarse butter cloths. A curious point in the display lies in the different colours noticed when the honey is derived from particular flowers. That from clover alone is so white and clear that it might almost be taken for pure glycerine, while the more fully flavoured product of heather is a deep golden-brown.

FOOD ANALYSIS IN LEEDS.

MR. THOMAS FARLEY, the City Analyst, in his quarterly report, states that the following articles have been submitted to him:—Milk, 119; skim milk, 2; butter, 0; raspberry jam, 1; Spanish juice, 3; milk of sulphur, 3; seidlitz powder, 1; total, 135. Six of the milks were watered; one had 49 per cent. of its fat removed, and twenty-seven were reported as of low quality. Thus twenty-nine per cent. of the milk samples were unsatisfactory. During recent years the analyses of over 100,000 samples of milk have given an average of over 12.7 per cent. total solids. The milks reported as of poor quality, each contained appreciably less than 12 per cent. of total solids. The use of boric preservatives in the Leeds milk supply appeared to have increased during the very hot weather. Twenty of the milks contained boric compounds in minute quantity, though in no case did the proportion exceed 20 grains per gallon. This question of adding drugs to preserve or colour food was now being considered by a committee appointed by the Government. All such substances should be declared at the time of purchase, as the use of antiseptics or preservatives in food might cause indigestion or injury to infants or delicate persons. One-half, or 50 per cent. of the samples of butter were adulterated, proving the frequent sale of margarine as butter. One sample of Spanish juice was of very low quality, and one sample of milk of sulphur was adulterated with at least 62 per cent. of hydrated calcium sulphate. The other samples were genuine.

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Food and Sanitation.

SATURDAY, NOVEMBER 18, 1899.

A CURIOUS MILK CASE.

At Flint Borough Sessions, John Hughes, of Maesydre Farm was summoned by Inspector R. Jones, for selling milk containing 8 per cent. of added water. Mr. Bromley prosecuted on behalf of the police, and Mr. T. W. Hughes defended. Inspector R. Jones stated, on the morning of the 15th September, he went to Maesydre Farm, Duke Street. He saw the wife of the defendant, and asked to see the dairy. She showed him the dairy, and he asked her to supply him with a pint of "new milk." She pointed to a pan in the dairy and said, "there is new milk this morning." He replied, "Very well; give me a pint of it." She supplied him with it, and in paying for it he said he was buying it for analysis by the public analyst; if she desired, he would

divide it and leave one part with her. Mrs. Hughes agreed that he should do so, and he divided the milk into three parts; one part he handed to her, the other part he handed to the analyst, and the third part he now produced. On the 19th September he received the certificate (produced) from the analyst. The certificate stated that there were not less than eight per cent. of added water. Some days after receiving the certificate, he met the defendant and told him he had received the analyst's report of the sample of milk, and that it was a bad one. The same evening defendant's wife called at the Police Station. She made some enquiries and said she hoped he would treat them the same as other people and take a sample from the cows. He told her he was not in a position to do so without instructions from the analyst. He told her he would represent her desire to the analyst. He wrote to the analyst, and he wired back to him to take a sample. On the evening of the 28th September he went to the farm to take a sample. He accompanied Mr. Hughes to the shippon. After he had got up from milking the first cow, he called his attention to his not having completed the milking, and that he had better go back and milk the cow dry. He went back and milked the cow dry. Defendant then milked the other cow and afterwards went to the dairy. He followed him into the house, and getting inside he very quickly disappeared from his sight into a dark room. He was there for some few seconds. He called him out, and said, "Hughes, you have done very wrong to take that milk out of my presence." Defendant said, "I only went in for the strainer." He added, "I must decline to take a sample." Hughes said, "Do you mean to say I put water in the milk in that room?" He replied, "I will say nothing." He made arrangements to take a sample the next morning. He went, and the sample was taken in proper order, and he submitted a sample to the analyst by registered post. On the 30th of September he received a certificate of the analysis, which stated that the sample would require 13 per cent. of water, or 25 per cent. of cream extracted to reduce it to the quality of the previous sample.—By Mr. Hughes: He told Mrs. Hughes that he would not take a sample from the "white cow." He expected to have a sample from the general bulk of the milk. Mrs. Hughes had told him that the milk of the white cow was inferior. He had been asked to take a sample of milk from the white cow, but he had no instruction to do so. He saw no reason why he should take a sample of milk from any particular cow. He did not apply to his superior for instructions. He was Inspector for the district and was responsible.—Re-examined by Mr. Bromley: The poorest milk was obtained at the end of the milking, and that was why he called Mr. Hughes' attention to his not having milked the "white cow" dry.—Mr. T. W. Hughes for the defence, said it was no offence to sell milk direct from the cow, no matter what its quality may be. Taking that as a proposition, what evidence was there of adulteration? If he could prove that the milk sample taken by Inspector Jones was from one cow, then he was justified in asking for a dismissal. He had sent a sample of milk to the analyst, but the County Analyst replied that he declined to analyse it as he could not act for the prosecution and also defence.—Mr. Edwards, veterinary surgeon, Mold, had been called in and had taken a sample and obtained an analysis which agreed to almost indetical figures with that taken by Inspector Jones. A second sample was taken and analysed and that also agreed. He submitted that the report of Mr. Lowe was worked out by his own standard.—John Hughes, the defendant, stated that he bought the cows at the Flint Auction Mart, one in March and the other in June; the white cow was in third-calf, and the red cow was aged. He could not give the age. He kept the milk separate; the white cow's milk for sale, and the red cow's milk for churning.—By Mr. Bromley: He was not dissatisfied with the cows. He did not know until now that the milk of the white cow was poor milk. He did not know why the milk was kept separate; the "missus" looked after the milk after he had milked the cows. He

milked into separate cans. The "round tin" was for the white cow, and the "flat tin" for the red cow. His wife knew the difference by the quantity of the milk, and the shape of the tin can. He did not add water to the milk. —In reply to the Magistrates' Clerk, defendant said, the white cow gave five quarts and the red cow ten quarts of milk. —Mrs. John Hughes stated that in September she made a test of what the red cow's milk would give of butter, and for that purpose kept the milk separate. The milk of the red cow was so good she thought she would test its quality as a butter producer. The red cow's milk she put into the souring pans, and it was the milk of the white cow that was for sale and of which she gave the pint to Inspector Jones as a sample. It was at her suggestion that analysis were obtained in order to satisfy themselves. They did not doubt the correctness of the reports, but they wanted analysis taken of the milk of each cow. The red cow was a good cow, and it was said that the white cow was an exceptionally good cow. Both cows were on pasture, and she made the test with the milk before the cows were put on dry fodder for the winter. —By Mr. Bromley: She was not aware of there being any considerable difference in the quality of the milk from the two cows. —Mr. E. P. Edwards, veterinary surgeon, Mold, stated that on the 31st October, he made an examination of the white cow at defendant's farm. He came to the conclusion that the cow was suffering from tuberculosis in the very early stages. The cow was in condition well nourished and was well looked after. He found the red cow to be what is called fleshy udder, and subject to periodical congestion. He took a sample of the milk and the same evening he made a microscopical examination. He found it deficient in fat globules, and the specific gravity was 10.27. On November 2nd he received a sample of milk from the defendant, of which he made an analysis, in conjunction with Mr. Brannon, B.Sc., Mold. The specific gravity was 10.28; the amount of fat, 2.09; solids, not fat, 7.48; which worked out at 9.01 of excess of water over normal analysis. Two analysis were made and both tallied. Another sample was handed to him on November 6th, having been taken in the presence of witnesses. The analysis worked out—fat, 2.86; solids (not fats), 7.60; the excess of water being 7.79. Witness further stated that the cow was in the early stages of consumption; the only solution would be to subject the milk to a tubercular examination. It was not at present dangerous. —By Mr. Bromley: The disease may be present and clinically provable without any test; it may be present in its incipient stage and could only be proved by tubercular examination. Without that test the disease might be in the incipient stage for six months, or it might be in a serious state at present. —Mr. Bromley: Yet you did not think it necessary for the protection of the public that your duty was to condemn the cow? —Witness: Tuberculosis is not yet an infectious disease under the Act. —Do you think it would be to the public good that their attention be called to the condition of the cow in order to protect them from tuberculosis? —Yes, it would be wise, but it would be advertising on my part. —Mr. Chantler, who took the samples of the milk for the veterinary surgeon and sealed the bottles, and Mr. Williams gave corroborative evidence. —Mr. Hughes made an offer that fresh samples be taken of the milk of each cow, as he already asked should be done by the police. —After considerable argument Mr. Bromley agreed that the case should be adjourned, and that samples be taken of the milk for analysis. —The Bench retired, and the Mayor afterwards intimated that the case was adjourned in order that analysis as suggested be obtained; the question of costs of adjournment to stand over until the case was decided. The Bench directed that the samples of milk be taken from that night's milking.

At Cardiff, on November 7th, before the Deputy Stipendiary Magistrate and Mr. T. H. Stephens, Arthur Sydney Haynes, of 108, Castle Road, was summoned at the instance of the Cardiff Health Authority for selling adulterated milk at a shop at that address. Chief

Inspector Vaughan conducted the case, and the inspector who visited the shop and took the samples had frequently to be interrupted by the Chairman for ignoring laws of evidence by relating conversation which had not been held in defendant's hearing. This waste of public time caused inquiry again to be made as to why the prosecuting solicitor of the Cardiff Corporation was not conducting the case. The milk, which had been exposed in an urn marked "new milk," was proved to have been adulterated with water to the extent of 14 per cent. A fine of 20s. and costs was imposed.

A Leaky Refrigerator.

At Bristol, on November 8th, Caroline James, shop-keeper, of 17, New Queen Street, Bedminster, was summoned for selling milk adulterated to the extent of 23 per cent. of added water. Mr. Roberts (from the Town Clerk's office) prosecuted, Mr. J. Inskip defended, and Mr. H. R. Wansbrough watched the case on behalf of Mr. Bennett, who supplied the milk to the defendant. Frederick William Simpson, Inspector under Food and Drugs Act, proved going to the defendant's shop on October 16th and purchasing the milk. At first the defendant declined to serve him with the milk he asked for, but after he told her who he was, she said, "It is last night's milk. I thought you wanted it to drink, or I should have sold it to you before." Witness took three samples, one of which he took to the public analyst, whose certificate was handed in. He asked the defendant who supplied the milk, and she said Mr. Bennett. Witness advised her not to say anything to Mr. Bennett, and he would come and take a sample from the milk as delivered. He afterwards went and took a sample of milk as delivered. In cross-examination, he said he did not go to Mr. Bennett, who lived near, because he knew he would not be able to get a sample of the same milk. Moreover, he did not at that time know that the milk was wrong. He had made enquiries at the farm from which the milk came, and he heard that in the week in which he took the sample a leakage was discovered in the refrigerator at the farm from which the milk came. Sidney Herbert King, farmer, of Charfield, said that on October 15th there was nothing the matter with the refrigerator, but he found something was wrong with it on the 27th. He then wrote to Mr. Bennett saying he believed there was some water in the milk owing to the leaking of the refrigerator, which was being put right. The defendant denied that she put any water into the milk, which she supplied as she received it. Mr. Inskip, addressing the Court for the defence, suggested that the adulteration was due to the leaky refrigerator, which leak was singularly discovered when a letter was written to Mr. King as to samples having been taken by the Inspector. The Bench said their duty was clear. The defendant sold milk adulterated to the extent of nearly a quarter. If there was any liability as between the defendant and those who supplied her it could be fought out in another court. She would be fined £3 and costs.

ERNEST WELSFORD, of 70, King Street, Bedminster, was similarly summoned, the adulteration in this case being not less than 20 per cent. The defendant pleaded guilty, but said he sold the milk as he bought it from Mr. Bennett. The Bench fined him £3 and costs.

At Sheffield, on November 8th, Albert Edward Andrews, wholesale milk dealer, of Gleadless, was charged under the Food and Drugs Act with selling milk of inferior quality. Mr. Collingwood, of the Town Clerk's Department, prosecuted, and said the case was before the Court some ten days ago, when he called his evidence. The case was adjourned at the request of his friend, Mr. Clegg, who defended, and who asked that the samples should be sent to Somerset House, for analysis by the Government analyst. Mr. E. W. Clegg said he had seen the certificate of the Government analyst, and it tallied exactly with that of the City Analyst, Mr. Allan. He pleaded that the defendant was not responsible for the poor quality of the milk which he attributed to the fact that the samples were taken at the end of September, after weeks of hot sun-

shine, when the pasture was not in good condition. The Stipendiary stopped the case in order that Mr. Andrews might bring a sample of the milk his cows are at present yielding. When that milk was brought the Stipendiary ordered a sample of it, and also a sample of to-day's milk to be sent to Somerset House to be analysed, and for that purpose he adjourned the case.

WATER AT SPIRIT PRICE.

At Bishop Stortford Petty Sessions, Charles Pettitt, landlord of the Half Moon Inn, Bishop's Stortford, was summoned for selling adulterated whisky. Mr. Johnson (the inspector) said he sent his assistant into the Half Moon and he brought out a bottle containing whisky. Witness at once took it back, informed Mr. Pettitt he wanted it for analysis, and divided it as was usual, leaving defendant one portion. The County Analyst (Mr. A. E. Elkins, St. Albans) certified the whisky to be six degrees below the legal limit of twenty-five degrees. Mr. Thornycroft said Mr. Pettitt had kept a public-house for something approaching twenty years, and this was the first time he had been summoned. His explanation of the matter was somewhat peculiar, but he (the solicitor) thought he should show there was no intention on his part to evade the law wilfully. Very likely what he did was wrong, but it was done in ignorance. It seemed that Mr. Pettitt had a certain class of customers who were in the habit of asking for twopennyworth of Scotch whisky. If he supplied them with the regular Scotch whisky they objected to the quantity and reminded Mr. Pettitt he had "forgotten" it. He was sure the Bench would see that for twopence they could not expect a good article, especially in Scotch whisky. In order to meet the taste of these customers, Mr. Pettitt kept a special bottle, and this was the bottle from which Mr. Johnson's man was supplied. He had twopennyworth at first, and the landlord believing him to be one of these "twopenny" customers, supplied him as stated. The man then remarked that he liked the whisky very much and would take a pint. That would show that Mr. Pettitt, although doing what was wrong, believed that he was justified in doing it to meet the wishes of certain of his customers. Nothing of the kind should happen again, and this "special blend" of whisky should be discontinued, and they hoped the Magistrates would take a merciful view of the case. The Chairman said they could not quite take the same view of it as Mr. Thornycroft. Defendant would have to pay a fine of £1 and 10s. 6d. costs.

JAMES CHAPMAN, landlord of the Boar's Head Inn, Bishop's Stortford, was also summoned for selling adulterated whisky on October 26th, the spirit in this case being ten degrees below the legal limit of twenty-five. Mr. Johnson deposed to purchasing the whisky. Defendant said he was not asked for two-pennyworth of Scotch whisky once in six weeks, and this happened to be some which he took over from the last tenant. He thought it was not quite right and sold it as "two-pennths." He did not adulterate it himself; he thought it was bad and had thrown a great deal of it away. The Magistrates did not regard the offence as intentional, but for the protection of customers fined defendant 5s. and 10s. 6d. costs.

At Leicester, on November 10th, George Fisher, licensed victualler, Old Robin Hood, Wood Gate, was summoned for unlawfully selling to Henry Stokes, some gin, which was not of the nature, substance, and quality demanded, on October 4th. Mr. J. Bell (Town Clerk) prosecuted. Mr. J. B. Fowler said the defendant was ill, and could not appear. There was no dispute about the facts of the case. Henry Stokes, an Inspector under the Corporation, said he went to defendant's vaults on November 4th, and asked for a pint of gin, and was served by the barmaid. He paid 1s. 8d., and told her it was bought for the purpose of analysis. He divided it into three bottles, and one of these had been submitted to Dr.

Monk. Dr. Monk certified that the gin was adulterated by seven per cent. more water than was allowed. Mr. Fowler said his instructions were that his client could not possibly account for the adulteration. The adulteration had been very slight. The defendant was fined £3 and costs.

At Barry, Mary Davies, the landlady of the Horse and Jockey public-house, Twynyrodin, Wenvoe, was summoned on Monday for selling adulterated whisky and gin. Inspector John Williams paid a visit to the house on October 22nd, in consequence of specific complaints that had been made to the police. He purchased half pint of whisky and the same quantity of gin, sending a sample of each to the public analyst at Swansea. Superintendent Giddings produced the certificate showing that the whisky was 43½ degrees under proof, and the gin 38½ degrees, 18½ and 13½ degrees below the limit. Mr. J. S. Batchelor: The Bench consider both cases proved. This is scandalous robbery of the public, for which defendant will have to pay £10 fine and costs in each case, or in default three months' imprisonment with hard labour.

At Callington Police Court, J. Cornish, of the Market Inn, Callington, was summoned for selling whisky 20 degrees under proof. Defendant pleaded guilty, and said it arose through an error of his merchant sending him whisky of a different age to that ordered, and he watered it accordingly. The whisky was really worth 2s. a gallon more than he was selling it. The Bench thought the offence unintentional, and fined him 2s. 6d. and costs.

SWEET SPIRITS OF NITRE.

A Wolverhampton Chemist Fined £40 and Sent to Prison.

Public Appeal Against His Conviction.

At Wolverhampton, on November 8th, Thomas Pilbrow, chemist, of 65, Bilston Road, was summoned for selling sweet nitre not of the nature and substance demanded, and paregoric which was adulterated. On September 29th, Mr. G. F. Allwood (the Inspector under the Food and Drugs Act) purchased from defendant some sweet nitre which was 60 per cent. deficient; in fact, the public analyst gave it as his opinion that the sweet nitre had never been up to the proper standard. On October 14th a small quantity of paregoric was purchased, and there was an entire absence of tincture of opium, a most important constituent. The Stipendiary said the cases were the most fraudulent he had ever had before him, and fined defendant £20 and costs in each case.

Ultimately it transpired that Thomas Pilbrow was unable to pay the fine and he has gone to prison for four months. The sentence is the subject of much comment in the Monmore Green district, and a petition is being drawn up for immediate signature on behalf of the man.

CORNELIUS CHARLES BURNETT, a chemist of Horseley Fields, was fined 10s. and costs for selling sweet nitre on September 29th and October 3rd, the drug being 30 per cent. and 22 per cent. deficient respectively. The spirits were not kept in a proper bottle, and were likely to evaporate.

BORACIC ACID IN CLOTTED CREAM.

At Westminster, on November 9th, several prosecutions by the St. George's, Hanover Square Vestry, for using boracic acid as an alleged injurious adulterant in clotted cream were heard. The traders summoned under the 6th section of the Adulteration of Foods Act, 1875, were Messrs. Hudson Brothers (Limited), of Ludgate Hill, Mr. Enoch Phillips, trading as John Croft, of St. George's Place, Knightsbridge, and Mr. Walter Simmons, of Elizabeth Street, S.W. Mr. C. F. Gill, Q.C., and Mr. A. W. Groser appeared for Messrs. Hudson Brothers: the other defendants, whose cases, it was arranged, should be adjourned *sine die*, pending the decision, were also repre-

sented. In the case of Messrs. Hudson Brothers; counsel for the vestry said that the real point was whether the vendors of clotted cream were entitled to put any preservative in it. There had been decisions given by magistrates against the use of boracic acid in milk. Mr. Gill said the magisterial decisions had nothing to do with the present issue. The acid was used in clotted cream as it was in the preparation of hams. Mr. Shiel said he was one of the magistrates who had given a decision about preservatives in milk. He thought there was a clear distinction between milk from the cow and clotted cream, which was the result of a process. The experts called for the prosecution included Dr. Corfield, Dr. Alfred Hill, public analyst for Birmingham, Mr. Charles E. Cassal, analyst of St. George's, Hanover Square, and Mr. Droop Richmond, chief analyst of the Aylesbury Dairy Company. Dr. Corfield stated that the use of boracic acid had been largely discontinued in medicine, because of its irritating effect on the stomach and intestines. It also occasioned skin eruption. The half-pound jar of Devonshire cream sold by Messrs. Hudson, contained about 16 grains of boracic acid—the *maximum* single dose of the drug for an adult. Clotted cream was now largely prescribed for children instead of cod liver oil. For the defence, Mr. Thomas Bond, consulting surgeon of Westminster Hospital, said he largely used boracic acid in his practice, and was perfectly familiar with its effects. It was only injurious to the digestion in very large doses. For the purpose of giving evidence before a Board of Trade commission, he had experimentally taken three 10 grain doses of boracic acid daily for the last six weeks. The drug had had no ill effect whatever; he was perfectly well. (Laughter.) It was absolutely necessary to use boracic acid, or other preservative in cream sent a long railway journey. It was stated that other well-known experts were to be called for the defence, and the case was adjourned.

DAMAGES AGAINST A WHOLESALE DEALER.

At Birmingham County Court, on November 9th, before his Honour Judge Young, an action was brought by Aaron Bembridge, of 137, Price Street, Smethwick, grocer, against Bridget Feely (trading as B. Feely and Co.), of 15, High Street, provision dealer, to recover £25 19s. damages for breaches of contract, on and between 1st March and 23rd April last. Mr. Sparrow (instructed by Mr. A. J. Glover), appeared for plaintiff, and there was no appearance on behalf of defendant. The plaintiff's case was that he bought wholesale quantities of Dorset butter from the defendant for the purpose of retailing it at his shop in Smethwick. A policeman's wife on one occasion, and a health inspector on another, were induced to buy samples of butter from the plaintiff, and were supplied with Feely's Dorset. The purchasers had the butter analysed, and it proved to be compounded of 11 to 22 per cent. of real butter, and the rest foreign fat. Plaintiff was summoned before the magistrates and fined 10s. and 12s. 6d. costs. He paid £3 3s. solicitor's fees. His business had been damaged by the conviction. His Honour gave judgment for the plaintiff for £14 18s., made up of the costs the plaintiff had paid in connection with the prosecution, and £10 for the damage to his business. We hope other defrauded retailers will follow Mr. Bembridge's lead.

THE ALLEGED POISONING BY TINNED APRICOTS.

At the offices of the St. Giles's District Board of Works, High Holborn, on October 20th, Dr. Danford Thomas resumed his inquiry into the circumstances attending the death of Frank Whitehouse Bartlett, 50 years of age, an American gentleman, on a visit to this country, who died at the Inns of Court Hotel, under mysterious circumstances, on July 26th last. It will be

remembered that the deceased, who was a professor of languages, was in charge of a pleasure party from the United States. He had been in excellent health, but after dining at the hotel he was seized with a violent illness, which resulted fatally two days afterwards. Another fatality, under somewhat similar circumstances, occurred, and upwards of 30 visitors to the hotel were seized with illness, the presumption being that poison was contained in some of the food or drink partaken of at the hotel. At the last hearing an exhaustive report from Dr. Klein, who had made a careful analysis of the contents of the stomach of the deceased was read, but this failed to shed any light upon the mystery, and the inquiry was adjourned for the personal attendance of Dr. Klein. Mr. Geo. Elliott (instructed by Messrs. Wontner and Sons) again appeared in the interests of the hotel proprietors; Mr. F. W. Beck was present on behalf of the London Chamber of Commerce; and Mr. Newton Crane represented the relatives of the deceased.

The chef of the hotel, re-called, was subjected to a detailed examination as to how the menu of the dinner on the evening in question was composed. In reply to the Coroner, who questioned him particularly as to the tinned apricots, which some of the witnesses had suggested might possibly have caused the mischief, he said that some of the tins were opened on the previous day, but most of them were opened on the day on which the meal was partaken of. The gooseberries were cooked in copper vessels, but no colouring matter was used on the day in question. The witness went through all the component parts of the dishes used at the dinner which resulted so unfortunately.

Replying to Mr. Elliott, witness said the dinner was prepared in exactly the same way as was the invariable practice at the Inns of Court Hotel, and was similarly followed at three large hotels where witness had previously been employed, and, he believed, at most of the best known hotels in London. Sometimes tinned fruits opened one day were used the day following, but from witness's experience there was no reason why this should be the case.

The Coroner remarked that the case was a very extraordinary one from the fact that various dishes which had been suspected as the source of mischief were never touched by the persons who unhappily suffered from the effects of the poison.

Dr. Mumford, re-called and examined by Mr. Newton Crane, said it was a fact that several of those who were taken ill had partaken of apricots, but he was of opinion, from the inquiries he had made, that some of those who were not seized with illness had also eaten the same fruit. The poison, however, might have been irregularly distributed, and one person might be much more seriously affected than another. At the same time, evidences of poison would undoubtedly assert themselves.

Dr. Frederick Womack, analytical chemist at St. Bartholomew's Hospital, said he altogether negatived the suggestion of mineral poisoning. He had, however, found no traces of bad vegetable matter, and the detailed description of the production of the menu had not resulted in his forming any definite conclusion. By Mr. Newton Crane: It was true that syrup might go acid, and this would affect tin and tinned fruit or whatever it might be would become affected, and lead to metallic poisoning. There was, of course, danger of leaving tinned food exposed for any length of time. The Coroner: But in this case all the evidence we have negatives the suggestion of metallic poisoning.

Mr. John Graham, of Dulwich, who dined at the hotel on the particular day in July said he partook of rice but no apricots. The next morning he was taken seriously ill, and was confined to his bed for a week.

Miss Graham, a nurse at St. Bartholomew's Hospital, who dined as a guest at the hotel, also said she did not partake of apricots, but was ill for three weeks.

Mr. Swindon, a squatter from Queensland, caused considerable amusement by saying that he partook of every course that was served at the dinner, yet felt not the slightest ill effects subsequently.

The Coroner said this was as far as they could go, as there was no additional evidence to throw light upon this singular case. Dr. Klein had only had for analysis a small portion of the contents of the stomach, and his exhaustive report had previously been read, so that after the evidence of Dr. Womack it now appeared unnecessary to call Dr. Klein. There was no doubt that the deceased died from gastro enteritis, the result of ptomaine poisoning, arising apparently from some poisonous matter being partaken of at the dinner on July 17th, but there was no evidence whatever to prove what particular article of food contained the poison.

The jury returned the following verdict: "That the deceased died from gastro enteritis, as a result of ptomaine poisoning, developed from the action of bacteria on some article of food partaken of at the Inns of Court Hotel on July 17th, but from what article the poisoning was set up the jury are unable to determine. The jury consider that the practice of leaving tinned articles of food open for 24 hours previous to consumption is one which should not be continued."

THE FEDERATION OF GROCERS' ASSOCIATION AND THE WARRANTY QUESTION.

FOODS AND DRUGS ACT, 1899.—Invoice a Warranty Question.—Suggestions from the Birmingham and Midland Counties Grocers' Association.—"In considering the question of the best means of procuring, or insuring, a legal warranty from wholesale firms with all invoices of goods which come under the Food and Drugs Act, the Birmingham Association have provided the following suggestions, viz.:—1. That in order to get the warranty clause universally adopted, and thereby save much trouble to the retail trade we recommend that a circular letter be sent to all interested firms stating our desire, and the form of warranty required, and ask them if they will see that all their invoices relating to articles coming under the Food and Drugs Act bear a legal warranty, and will they establish such a system in this respect that it will not be necessary from time to time for the Federation, or any of the members of its affiliated associations, to make any further applications respecting the warranty clause. 2. A list of replies, and of those firms who neglect to reply, should be forwarded to all grocers' associations. 3. Every association should be advised of the importance of a warranty accompanying every invoice of goods coming under the Food and Drugs Act, and they should be requested to circularise their members to acquaint the secretary of their respective associations of any difficulty their experience in obtaining the necessary warranty from any wholesale firm. 4. That where grocers buy goods as pure, and the wholesale firm either neglects or declines to give a warranty, all grocers should be advised to refuse to take delivery of the goods. 5. That the members be advised to adopt a printed slip, which should always be signed by the agent of the seller of goods, in order that it may be made to come within the case of *Laidlow v. Wilson*."—Copy of suggested slip.—"Birmingham. Date. I have this day sold to G. Bolton, Grocer, 157, Icknield Street, Birmingham, 1 Cask White Pepper, at 10½d. per lb.: marked x x x, per G. W. Railway, carriage forward. Two and a half per cent. fourteen days, which is guaranteed absolutely pure. Signed on behalf of Jones, Brown and Smith. Thomas Robinson."

Liverpool Association:—"That it be a suggestion to the General Purposes that they instruct the Federation solicitor and secretary to prepare a concise report of all the alterations necessary for the conduct of the retail trade in consequence of the passing of the new Food and Drugs Act, and that such report be circulated

amongst the members of all associations affiliated with the Federation."

Liverpool Association:—"That the General Purposes Committee of the Federation consider the advisability of framing rules bearing upon the new Act in reference to invoices being a warranty, in such a way that goods be purchased under the rules and regulations of the Grocers' Federation of the United Kingdom, on the lines of the Liverpool Produce Exchange, the Sugar Refiners' Associations and other similar Associations."

Mr. BOLTON (Birmingham), in moving the resolutions for his association, said they were merely suggestions from his association, and no hard-and-fast rule. Most of the ground had been covered over and over again, and it was a pleasing fact to see the activity which had existed amongst the associations, and they were also glad to see the activity which the Federation had put into the matter. He must re-echo the remarks of their Chairman as to the manner in which the Government had thrown them overboard, and they must protest against it. It was his duty to mention one matter in which the Birmingham Association was somewhat disappointed with the Federation. A letter came into the hands of the association, which they considered very powerful, from one of the principal wholesale houses in the city. That letter was sent to the Federation, but was returned to them without comment. They found that they were hampered in that question by wholesale firms, who could not or would not give them the warranty they required, and it was for the Federation to try and formulate a scheme to get it. No doubt most of them there could demand a warranty, but there were many small people who could not do so, and those were the people they were there to protect, and that was a matter evaded by 90 per cent. of the wholesale firms. His association said the wholesaler should be bound to name the article and give a warranty. The trade was now looking to them, and he hoped the Federation would rise to the occasion. While the suggestions he brought forward might not be perfect, at the same time suggestions would be made to make a scheme as perfect as possible. There was no doubt they would have to do some educational work in respect of wholesale firms, because they seemed to be perfectly ignorant of what should be done. He moved that the Birmingham resolution be referred to the Parliamentary Committee for consideration.

The Chairman said it was very important that the Parliamentary Committee should also have powers to deal with any emergency that might arise between this and the next General Purposes Committee.

After some further discussion the three resolutions were referred to the Parliamentary Committee, with power to act.

THE ADULTERATION OF DRUGS.

THE report of the Principal Chemist of the Government Laboratories, which has recently been published, is an interesting document, seeing that these laboratories have of necessity to act as the final court of appeal in various questions concerning analysis, as, for example, in regard to all disputed analyses under the Food and Drugs Act. Bearing in mind, says *The Hospital*, the very large number of samples which are annually taken by the sanitary authorities for examination under this Act, we venture, however, to think that the strikingly little work done by the Government Laboratories in the analysis of drugs is indicative of want of energy on the part of the sanitary authorities in putting into operation that side of the Food and Drugs Act which applies to these compounds. There can, indeed, be no doubt that a lamentable degree of laxity prevails in this matter, and that the number of samples of drugs examined by the authorities is ridiculously small when compared with those of food seized for the same purpose. As illustrating the freedom and impunity with which the substances dealt in by chemists are apt to

be adulterated, we may refer to an investigation which we lately made in regard to the composition of belladonna plasters. Our attention had been drawn to the fact that the amount of belladonna contained in certain much advertised belladonna plasters was far below that which is ordered by the Pharmacopœia, and to ascertain what was the exact position of affairs we had samples taken from a considerable number of chemist's shops, including those of some makers who rather posed before the public as making a speciality of these plasters. The result was amusing, although somewhat destructive of one's faith in man, and especially in chemists. Unfortunately it was impossible to publish the report as it was received from our chemist, containing as it did the names of all the parties implicated. We had no desire to be involved in a series of actions for libel, and so the matter was allowed to drop.

The search for adulteration should not be limited to questions of butter, and pepper, and coffee, and such like articles of diet. Drugs, on the purity of which we trust in the treatment of disease, should be subjected to just as strict analysis as the foods we eat. Notwithstanding the greatly widened field from which the physician of to-day draws his means of treating disease compared with the shelf-ful of bottles which constituted the therapeutic armamentarium of the apothecary of days gone by, the fact remains that drugs form a large, and in many cases the principal means on which we have to depend in the control of those ailments by which our patients are affected. Thus it happens that the honesty of the druggist is the very pivot on which hangs the life of the patient in many cases. How frequently this is the case is a matter of common experience. So strongly has this been felt and recognised that in the Sale of Food and Drugs Act, 1875, heavy penalties were imposed on all who sell to the prejudice of the purchaser any drug which is not of the nature, quality, and substance asked for. As is well known, there has been plenty of litigation on the subject, and in regard to food many adulterators have escaped in consequence of a somewhat liberal reading of certain clauses in the Act, which provide that no offence shall be deemed to have been committed where any matter or ingredient not injurious to health has been added to the food or drug because the same is required for the preparation or production thereof as an article in a fit state for carriage or consumption, or where the food is unavoidably mixed with any extraneous matter in the process of collection or preparation. But in regard to such drugs as are included in the British Pharmacopœia all doubt and difficulty is removed. By the Medical Act of 1858 it is enacted that "the General Medical Council shall cause to be published under their direction a book containing a list of medicines and compounds, and the manner of preparing them, together with the true weights and measures by which they are to be prepared and mixed." This book is "The British Pharmacopœia," which gives the definition, and fixes the legal standard of all the drugs and preparations named therein, so that in regard to such things there need never be any doubt as to what is really meant by a drug being of the "nature, quality, and substance asked for." It must conform with the characteristics given in the Pharmacopœia, or it must be wrong.

Under these circumstances we decided to ascertain how far druggists were in the habit of complying with the directions of the Pharmacopœia in regard to some of the more ordinary preparations commonly sold over the counter. Now, belladonna plasters, as well as being prescribed by physicians, are also commonly purchased by the public even without a prescription, and it appeared to us that such a preparation would be a good one on which to test the *bond fides* of the manufacturing druggist and his readiness to supply the public with reliable goods prepared according to the legal standard. With this object in view we purchased samples of belladonna plaster from 16 well-known firms or their agents, and requested Dr. B. H. Paul, of 13, Fenchurch Avenue, to undertake there analysis, so as to ascertain how far they complied

with the conditions specified in the British Pharmacopœia.

We certainly were not prepared for the result, nor do we think that any of our readers, however much some of them may be ready to doubt the honesty of man, will be quite prepared for the extraordinary amount of adulteration shown in the subjoined list. It must be premised that, according to the British Pharmacopœia, belladonna plaster "contains 0.5 per cent. of the alkaloids of belladonna root."

The following is Dr. Paul's report, from which, however, in deference to the law of libel, we have omitted the names of all firms except those whose plasters were of full strength:—

"Sirs, — In accordance with your instructions I have submitted to analysis the samples of belladonna plasters marked as under, and supplied by you on December 22nd and on subsequent dates, with the following results—

					Alkaloid p. c.
Seabury and Johnson	...	...	...	...	0.52
Name withheld	...	...	...	...	0.06
"	"	...	...	...	0.04
"	"	...	...	...	0.19
"	"	...	...	...	0.16
"	"	...	...	...	0.16
"	"	...	...	...	0.12
"	"	...	...	...	0.12
"	"	...	...	...	0.13
"	"	...	...	...	0.27
"	"	...	...	...	0.11
"	"	...	...	...	0.13
May's Drug Stores	...	...	...	...	0.56
Name withheld	...	...	...	...	0.09
"	"	...	...	...	0.12
"	"	...	...	...	0.27

BENJ. H. PAUL.

"Analytical Laboratory,

"13, Fenchurch Avenue, E.C.,

"January 26th, 1899."

We hardly need to comment upon the facts here displayed. The list tells its own tale and points its own moral, for we find opposite the names of firms well known, and, indeed, well advertised as makers of these things, figures showing that their plasters contain but a small quantity of their proper ingredients—the proportion of the alkaloids going down and down, till in one case the amount is less than one-twelfth of what the law requires.

Clearly, however, it is possible to obtain a belladonna plaster of the full strength, and there, no doubt, are many chemists where such a plaster can be bought. We should be the last to suggest that such adulteration as is here displayed is universal among chemists and druggists; but what we do say is that to those who act honourably in the matter a great wrong is done. The wrong done to the public by such adulteration is obvious enough, for it evidently is possible to enter a good shop and to buy a pharmacopœial preparation stamped with the name of a reputedly good manufacturing druggist, and yet to be supplied with an article which is ludicrously below the standard strength. But to the honest druggist also the hardship is very great in that he has to struggle against an unscrupulous competition, and that no one believes him however much he may declare that his drugs are pure. The public are helpless in the matter, and it is only by the action of the inspectors under the Food and Drugs Act, or by the aid of such an exposure as that which we make to-day that such unprincipled competition can be kept in check.

Unfortunately, the matter does not end with bella-donna plasters. We are assured that much the same sort of sophistication goes on in many branches of the drug trade, and that, trusting to the absolute helplessness of the purchaser, druggists only too often supply drugs which are anything but of the "nature, quality, and substance asked for."

THE LOCAL GOVERNMENT BOARD'S REPORT ON ADULTERATION.

THE 28th annual report of the Local Government Board just issued, shows that during the past year there was submitted for analysis under the provisions of the Food and Drugs Act, 49,555 samples, and of this number 4,319 were found to have been adulterated, and proceedings were instituted in respect of 2,685 cases. Fines were imposed in 2,256 cases, amounting in the aggregate to £4,131 6s. 6d., excluding costs in most instances. The average penalty was thus £1 16s. 8d. The highest fine was £25, which included £10 for an offence under the Margarine Act, 1887. There were 24 fines of £20 each, 11 between £10 and £20, 38 at £10, 21 between £5 and £10, and 139 of £5. More than a third of the fines were of 10s. or under; 166 being less than 5s. including 60 at 1s., 14 at 6d., and 2 at 4d. each. The following is a table showing the numbers of samples examined during the year:

	Examined.	Found Adulterated.
Milk	20,315	2,011
Bread	717	6
Flour	1,013	20
Butter	9,375	998
Coffee	1,879	187
Sugar	584	17
Mustard	774	30
Confectionery and Jam	488	14
Pepper	1,566	13
Tea	486	15
Lard	1,421	2
Wine	84	2
Beer	256	1
Spirits	4,872	603
Drugs	1,641	196
Other articles ...	4,083	204
Total	49,555	4,319

It will be seen from this table that the proportion of adulterated samples was 8·7 per cent. of those examined. This is the lowest percentage of adulteration which we have recorded, and is less than one-half of the rate for the years 1877 and 1878.

Butter and Margarine.—9,375 samples of butter, or what was sold as butter, were examined, and 998, or 10·6 per cent., were condemned. A large number of samples of margarine were also taken, and many of them were found to have been sold contrary to the provisions of the Margarine Act, 1887.

132 samples of butter were submitted to the analysts by private purchasers, and nearly two-thirds of them were condemned. This, however, is explained by the fact that a private person is not likely to put himself to the trouble and expense of obtaining an analysis unless he has good grounds for supposing he has been defrauded. 215 samples were submitted by agents of the Royal Lancashire Agricultural Society and the Butter Association, with the

result that 119, or 55 per cent., were condemned. This high rate is mainly due to the fact that the agents having devoted themselves specially to butter, have thereby acquired a remarkable degree of skill in the detection of offences. Only samples which their long experience leads them to believe to be spurious are submitted for analysis.

On the other hand, if we exclude the samples taken on behalf of these Associations and by private purchasers, the rate of butter adulteration is found to be 14·2 per cent., in the 32 great towns 12·9, and in the remainder of the country only 4·4 per cent. It is worthy of remark that in the Borough of Derby no analyses of butter were made by the public analyst, while in no less than six other larger towns fewer than 10 samples were analysed.

The analyst for Derbyshire calls attention to what he terms an extremely gross example of fraud. He states: A sample of fresh butter submitted to me showed upon analysis the presence of 40 per cent. of foreign fat, and the fraud was rendered of very serious aspect by the fact the mixture had been made up into round pats, in exact imitation of the shape in which fresh dairy butter is usually sold. The mixture could not by the closest inspection be distinguished from the genuine article. As regards this form of fraud, the analyst for Lancashire states that the mixing of a small quantity of margarine can be justified on the ground that it renders the margarine more pleasant and palatable. But the mixing of a large quantity of butter with margarine is indefensible on any honest plea. It can only be intended to be sold as butter, and is necessarily fraudulent.

Legal proceedings were taken in respect of 764 samples, and 679 penalties were inflicted amounting to £1,844 18s. 10d. There was one of £25, which included £10 under the Margarine Act; 21 were of £20; 9 were between £10 and £20; 23 were of £10; 15 between £5 and £10; and 47 were of £5. The remainder averaged £1 13s. 1d. each.

Sugar.—17 of the 584 samples of sugar were reported against, and 12 fines, amounting to £11 15s., were imposed.

Mustard.—Of 775 samples of mustard examined, 30 were condemned, and 6 fines were inflicted.

Confectionery and Jam.—488 samples of confectionery and jam were analysed, and 14 found to be adulterated, there being one conviction.

Pepper.—Thirteen samples of pepper out of 1,566 taken were reported against, and the vendors of three of them were fined.

Lard.—Of the 1,421 samples of lard analysed, all but two were found to be genuine. This is a striking contrast to the figures of 1888, when cottonseed oil was extensively used to adulterate lard, and 299 samples out of 1,782 were condemned.

Coffee.—Of the 1,879 samples of coffee examined, 10 per cent. were condemned. As usual, many samples were reported to contain large quantities of chicory. In one case in Cheshire a sample was found to contain sugar. The analyst states that, "This was probably due to the practice of roasting coffee with a certain proportion of sugar, which will increase the weight of the coffee from 5 to 10 per cent. This admixture is so skilfully done that each berry is coated with sugar, and anyone buying his coffee in the berry would think he was obtaining it pure. Some may say this is an innocent adulteration, but it is at the same time a most profitable one, for the sugar, which is not more than one penny a pound, is sold at the rate of a shilling or more." Another sample taken in the West Riding of Yorkshire was found to contain 10 per cent. of ingredients other than coffee. Respecting this the analyst writes: "These ingredients consisted partly of chicory and partly of a preparation containing starch, the

exact nature of which I was unable to identify, but which was probably derived from maize. The composition of this sample is of peculiar interest, seeing that the foreign ingredients are just those which would be present in an article ground from the fictitious coffee berries now manufactured and sold largely in Germany, and which occasionally find their way into this country. This fraudulent product is manufactured with such skill that even a close inspection does not suffice to distinguish it from genuine coffee berries. Hence a perfectly honest retailer may be supplied by the wholesale dealer with an article composed in part of these fictitious beans without having any suspicion that he is being defrauded."

Legal proceedings were taken in respect of 121 out of the 187 samples condemned, and 104 penalties were inflicted, amounting in all to £110 4s. 8d. Two of the fines were of 4d. each and costs, these trivial fines being imposed for the unacknowledged addition to coffee of 50 and 75 per cent. of chicory respectively.

Miscellaneous articles.—Of the articles not specifically enumerated in the table, 4,083 samples were analysed, and 204, or 5 per cent., were adulterated. 569 samples of ginger were examined, and 15 were reported against; 5 samples of cheese out of 554 were condemned, one of the five being stated to contain the large amount of 47 per cent. of water; 24 out of 424 samples of vinegar were adulterated, and 24 out of 218 samples of olive oil; 182 samples of sago were examined, and 20 were condemned because (in most cases) tapioca made up in the form of sago had been supplied. The intrinsic value of the two articles may not be very different, but they are the product of different plants, and there seems no reason why they should not be sold under their correct designations. As usual, more than one fourth (56 out of 207) of the samples of cocoa were condemned, and in one case a fine of £20 was inflicted. All the 333 samples of oatmeal were passed as genuine, and only one of the 328 samples of arrowroot was condemned. Of the 175 samples of ice-cream 10 were reported against.

ENTERIC FEVER CAUSED BY INFECTED MILK IN GLASGOW.

DR. CHALMERS, Medical Officer of Health, Glasgow, in his annual report, says that in the western district of the city 51 cases of enteric fever occurred which were traceable to milk infection from an illness occurring in the family of a dairy employé.

YORKSHIRE ICE AND COLD STORAGE COMPANY.

Several members of the Leeds Board of Guardians visited the premises of the Yorkshire Pure Ice and Cold Storage Company (Limited), in New York Street, Leeds, at the invitation of the directors. This, we understand, is the only establishment in the country at which the two branches of ice-making and cold storage are combined. Though the stores have only just been completed, they have been in partial use for some months, consequently the visitors were enabled to form an idea of the extent of the operation which it is intended to carry on. There are several rooms with a temperature varying from 15 to 45 degrees, regulated according to the nature of the goods to be stored and according to the state of the weather. All kinds of perishable and consumable provisions—butter's meat, fish, poultry, game and fruit—may be kept in a perfectly dry, cold temperature all the year round, and food, which under ordinary circumstances would go bad may be preserved indefinitely in good condition. The storage capacity of the premises is equal to about 10,000 tons. The ice machines are capable of producing something like 50

tons daily, and the Guardians saw several huge crystal blocks, each weighing about 5cwt. The directors hope to encourage the use of ice for domestic purposes, and they intend next summer to adopt the plan of supplying small refrigerators and delivering ice daily to the homes of the consumers according to requirements. The refrigerating and ice machinery is throughout on what is known as the "Linde" system.—*Yorkshire Post*.

THE MASSACHUSETTS MILK STANDARD.

IN Massachusetts the milk standard is fixed by law, and is:—

	April to August (inclusive).	Other Months.
Total milk solids	12.0 per cent.	13.0 per cent.
Solids not fat	9.0 "	9.3 "
Fat	3.0 "	3.7 "

A new Adulteration of Food Act provides that food mixtures in packages be labelled as such with the name and per cent. of all ingredients therein; that the grade and makers' name of all canned foods be stamped on the cans, and that all those which have been soaked before canning be plainly marked "soaked." Heavy penalties are provided for fraudulent stamping or labelling—*Public Health*.

THE DANISH BUTTER SWINDLE.

ONE may supply "best Danish" without pretending to supply best English, says *The Grocer*, and it quotes a very instructive circular from a Danish house stating that "Unfortunately it is an incontrovertible fact that there are butter exporters in this country who entirely deal with transit goods. These exporters ship large quantities of Swedish, Finnish, Russian, and German butter *via* Denmark to England, but as the place of origin not is indicated on the packing, and the butter is shipped from Denmark, it is pardonable the British importers in good faith buy and sell such kinds of butter as 'Danish.' On this manner inferior qualities of butter from the above-named countries are sold to high prices, which not in proportion to their value, but at the same time the reputation of the Danish butter will gradually be undermined by the classification with such butter. On account of this an agitation to get these awkward affairs altered has been started by the Danish butter producers. They request that all Danish butter shall be branded: 'Danish Produce.' If this can be realised the foreign butter shipped *via* Denmark will scarcely be classified with or sold as 'Danish,' the importers knowing that no butter is Danish unless it is branded 'Danish Produce.' The butter producers trust the British importers will sustain their efforts to work out this pretension, being in the importers' own interest easily to be able to distinguish between Danish butter and butter from other countries, even if both kinds are shipped from a Danish seaport. To make an end of these confoundings we have registered the mark at foot of this circular as well in Great Britain as in Denmark, and other firms cannot ship butter branded with this mark without conflicting with the laws. We think to take this mark into use from the middle of October. By the choice of it we find having made proper allowance for both wholesalers and for retailers, why we trust it will be received with the greatest satisfaction from all sides. If any of our friends have objections against our mark, we shall be glad to receive these as soon as possible."

ERRATA.

WE find that by an error two items in our issue of October 28th were not noted as having first appeared in *The British Food Journal*. They are, "The Presence of Lead in Food," and "The Presence of Mercury and Lead in Cosmetics."

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OVER TWO THOUSAND TESTIMONIALS
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Food and Sanitation.

SATURDAY, NOVEMBER 25, 1899.

SOME SIGNIFICANT FACTS ABOUT DANISH BUTTER.

In the art of securing cheap advertisement for their butter the wily Danes are past masters. Their latest returns show that they possess seventeen margarine manufactories, and that no less than 27,983,556 lbs. (Danish) were manufactured as against 23,720,569 lbs. in the preceding twelve months. 4,257,511 lbs. (Danish)

were also imported from Germany, Holland, Norway, and Sweden. These figures ought to open the eyes of the English public to the colossal nature of the Danish butter swindle, but the Danes know how to stop damaging revelations. During the past few years this has been done by the prosecution at timely periods of a few alleged Danish butter companies, thus securing an opportunity for a glowing eulogy of the purity of Danish butter and cheap puffs anent the strict care alleged to be taken to prevent any adulteration by Danish dairy farmers. What becomes of the enormous quantity of margarine manufactured and imported, 32,241,067 lbs. (Danish) is not disclosed, but one fact is clear—the amount which Denmark exports as margarine is hardly worthy of mention, nor is it at this moment likely to be the subject of much enquiry, because, wily as ever, the Dane's have devised another cheap bamboozle of the English Press. Our newspapers have just conveyed to the public the well-timed information that a committee of influential Danish merchants and farmers has been formed for the purpose of expressing sympathy with Britain and to make some useful gift to the British troops in South Africa.

It has now been decided that the gift shall take the form of 50,000 boxes filled with Danish butter.

As an advertisement and cover of a swindle this move of the Danes is distinctly clever. Denmark ranges herself on our side (unlike the *montre tigre moitié singe* French) and when other nations revile us the Danes say they will send to our troops 50,000 boxes of butter. Whether it is mere bluff or not does not matter, Danish butter secures another free advertisement from the entire English Press. It is nobody's business to see if the 50,000 boxes of butter are sent to our troops, and mark the wily Dane again! It is not stated if the boxes are cwt. ones, or pounds, half-pound, or ounce boxes. It is only a craftily worded puff of Danish butter, but it succeeds in impressing upon the average English reader exactly what is intended, viz., that Denmark feels with us in our losses in South Africa, and testifies to her friendship by the munificent offer of 50,000 boxes of butter—truly a clever example of throwing a sprat to catch a whale. In the face of this generous gift of 50,000 ounces, quarter-pounds, half-pounds, pound, or cwt. boxes of Danish butter, of which Tommy Atkins may receive none, or as much in the pound as the Balachava heroes did of the fund raised for their benefit, it would naturally seem ungracious to say or write anything of an unpleasant kind, however true, about the Danes and their margarine imports and butter swindle. Thus argue the Danish butter plus margarine gang and their plans have succeeded.

No one asks what becomes of the thirty-two and a quarter million pounds of margarine manufactured in and imported into Denmark. If the question were asked the Dane has the glib lie ready that the Danes use the margarine themselves and send us their butter. If this be true what a splendid testimonial it is to the value and goodness of margarine, and what fools must the public be to pay 1s. 2d. per pound for Danish butter when they can

obtain the margarine preferred by the Danes themselves at 4d. to 6d. per lb. ? The lie is too barefaced—the Danes know thoroughly well the variations in English, Irish, and other butters caused by differences in feeding, breed of cows, soils, climate, and mode of manufacture. They know they can put about 10 per cent. of margarine into butter sent to us—Denmark's great customer—and that there is not an analyst who knowing the variations we have enumerated, would swear with absolute belief that the butter was adulterated, hence Denmark's increasing need of margarine.

Nevertheless, despite the bunkum, the Danes contrive to get advertised in our press without paying for it, the truths we published some years ago of Danish frauds have had beneficial results for English and Irish butter producers. Thus at the meeting of the Food Preservatives Enquiry Committee on November 15th, Mr. James Hudson, Bros., Limited, informed Sir H. Maxwell, Bart., M.P., Professor Thorpe, Dr. Bulstrode, and Dr. Tunnicliffe that his firm had given up the sale of Danish butter two years ago and that other firms were giving it up, and he believed it was gradually decreasing in favour mostly of Irish butter, his firm's trade having increased 200 per cent. in Irish butter in the last five or six years. Mr. J. C. Lovell coincided with the opinion of Mr. James Hudson, only more so as condemnatory of Danish butter, and as Mr. Lovell is probably the largest dealer in butter in Europe his opinion carries great weight. These facts should encourage native butter production, and cheer in their task the Hon. Horace Plunket, M.P., and others who have worked so hard to bring home produce to the position it never ought to have lost.

WATER AT SPIRIT PRICE.

At Overton, Wm. Jones, landlord of the Emral Arms Hotel, Worthenbury, was charged at Overton, on Saturday, with selling adulterated whisky. Police-inspector Williams said that in September he purchased from the defendant some whisky, which he divided into three portions, one of which he gave to defendant's daughter, and the other portion he forwarded to Mr. Lowe, of Chester, the county analyst. In his report the analyst stated that the whisky was adulterated with water to the extent of 35 per cent. below proof. That meant that there were sixty parts of water to forty parts of whisky. A penalty of £4 and costs was imposed.

At Kensington Petty Sessions, Gilbert Mackenzie, of the Clarendon, Clarendon Road, Notting Hill, was summoned at the instance of the Vestry for selling rum diluted with water. Mr. Chambers Leete said that in the case of rum, 25 per cent. of water was allowed, but in this case the amount was 30 per cent. Mr. Hanson, who defended, said his client was breaking down some rum in the morning, and having added the water he forgot to put in the "rounings." He did not know that water was 23 per cent. heavier than rum and that it naturally went to the bottom. The Bench inflicted a fine of £5 and costs.

A point of interest was raised in a case which Mr. Slade decided on November 16th, at Southwark Police Court. Robert Fairbairn, licensed victualler, the Oakley Arms, Oakeley Street, Lambert, was summoned by Inspector Perrin, of the Lambeth Vestry, for selling whisky diluted to the extent 35.4 per cent., 25 per cent. being the legal limit, except with notice to the purchaser. Mr. Maitland submitted that legal notice was given,

inasmuch as the bottle in which the whisky was sold bore a label stating that all spirits sold at that establishment were diluted, but not below half-proof strength. It was admitted that the bottle was wrapped in paper when it was handed to the purchaser, whose attention, therefore, was not called to the label until the purchase had been completed. The question at issue was whether it was necessary to call the customer's attention to the label before taking his money. In arguing that it was not necessary Mr. Maitland relied on "*Jones v. Jones*," a coffee case decided by the Court of Queen's Bench. The Magistrate, having taken time to consider, now decided in favour of the defendant, and dismissed the summons.

At Portmadoc, on November 17th, John Crocker, landlord of the Sailors' Home, Portmadoc, was summoned by Mr. Vaughan Davies, Inspector, Carnarvon, for selling adulterated whisky.—Mr. Davies said he called at the house, and asked for sixpenny-worth of whisky, which was supplied him. He informed the defendant that it would be sent for analysis, and from the analyst's report the whisky was found to be 5½ per cent. under the standard. The Defendant said the whisky was the last quantity they had in the cask. A fine of £1 and costs was imposed.

AN ABORTIVE GOLDEN SYRUP PROSECUTION.

At Chippenham Petty Sessions, Messrs. W. Macfie, J. W. Macfie, J. G. A. F. Macfie, and O. Easton, trading at 34, Moorfields, Liverpool, as Macfie and Sons, sugar refiners, were summoned at the instance of the Wiltshire County Council for using a false trade description in issuing tins of golden syrup labelled as "*Natural Golden Syrup*," whereas it contained not more than 30 parts per cent. of syrup derived from sugar, and at least 70 parts per cent. of glucose syrup. Mr. Bevir prosecuted, and Mr. Inskip defended. The facts of the case were to the effect that in August last the Food and Drugs Act inspector purchased from Mr. Latham, grocer, Lacock, a tin of golden syrup. It bore a label to the effect that the contents consisted of "*Natural Golden Syrup*," and no chemicals. The county analyst, Dr. Bernard Dyer, certified that the sample contained at least 70 per cent. of glucose. Dr. Dyer was called to prove the analysis. He said that glucose, which was much less sweet than golden syrup, was an extract of maize starch. Glucose was frequently mixed with pure syrup to prevent crystallisation. He was aware that glucose was largely used in the adulteration of syrup; it was cheaper than the pure syrup, and it was not correct to say that no chemicals had been used.—Cross-examined, he said he knew that vitriol (sulphuric acid) was used in the preparation of golden syrup; but he would not go so far as to say that either chemicals or glucose must be used in the preparation of golden syrup. For the defence Mr. Inskip contended that there was no intention to defraud. It was well known in the trade that it was wiser to use glucose than vitriol, and golden syrup could not be made without the use of one or the other. The use of glucose was not disputed until December last, and the firm then issued fresh labels and sent a circular to their customers. They had since issued a further label, which stated, "*This syrup made partly from sugar and partly from maize is sold as table syrup, and not as golden syrup or treacle.*" The Bench came to the conclusion that there was no intent to defraud, and dismissed the case.

MARGARINE PROSECUTIONS.

At Oldham, on November 13th, Samuel B. Tonge, grocer, 73, Greenacres Road, was summoned for two breaches of the Margarine Act. The prosecution was at the instance of the Sanitary Committee, and was conducted by Mr. Hallsworth, Deputy Town Clerk. He stated that on October 13th Sanitary Inspector Burnett visited the shop, and saw two dishes of butter on the counter, one simply marked "*1s.*" and the other "*11d.*" The public analyst had certified that the mixture contained 86 per cent. of foreign fat and 14 per cent. of butter fat, and was

margarine. There should have been a label attached, in letters not less than $1\frac{1}{2}$ in. square, containing the word "margarine," and the wrapper should also have had the same word in letters not less than $\frac{1}{4}$ in. square. The defendant pleaded guilty, and said he did not know he had committed an offence. One side of the dish, which had been inadvertently turned round by his wife, contained the word "margarine," and he did not know that the wrapper should also have contained it. The defendant was fined 20s. and costs in each case, and ordered to also pay the analyst's fee.

At the Guildhall, London, on November 14th, Arthur L. Message, a dairyman, was summoned for selling margarine as butter for selling it in packages that were not properly marked. He was fined £5, and 6s. 6d. costs.—Reuben Jackson, general dealer, of Cloth Fair, similarly summoned, was fined £5 and costs.

At Dublin, on November 16th, James J. Nolan, 4, Curzon Street, was fined £3 for selling margarine without a label attached. For a similar offence John Dooley, 14, Augier Street, against whom there were previous convictions, was fined £7. Patrick Tierney, 5, Chatham Street, was fined £5 on a similar charge. Patrick Burke, 15, Wexford Street, was also fined £5 for exposing for sale margarine without the proper label. John Cogan, 6, Charlotte Street, was prosecuted for refusing to sell to Inspector Timothy Keogh, on the 26th September, a pound of butter required by him for the purpose of analysis. Defendant and his assistant, James Cullen, were also charged with having assaulted the Inspector on the same occasion. Mr. Rice prosecuted in this and all the other cases on behalf of the Corporation. Dr. Falconer (instructed by Mr. W. E. Garland) defended. Inspector Keogh gave evidence of having on the 26th September entered the shop of the accused, and demanded a sample of butter for analysis by the Public Analyst. The defendant's assistant first refused to give the butter, though witness offered payment. When witness insisted on his demand, and took some butter that was on the scales, the defendant caught hold of him by the throat, and knocked him down in the shop. Witness was thrown on the butter. His coat was all smeared with it, and he was cut in the hand. He went for a policeman, and when he returned to the shop the defendant said he would make an example of him, and that he would commence at the top. Cross-examined by Dr. Falconer.—Witness said he believed that under the Margarine Act he was entitled to take the butter without "purchase." Defendant's assistant was willing to sell him a sample of butter from the side of the piece that witness did not want it from. James Cullen, examined for the defence, stated he had offered to cut a piece off the side of the roll for the inspector, but the latter wanted to get it off the centre, but witness declined to give him a sample from the centre as it would spoil the roll. The inspector became defiant. Cogan caught hold of Keogh to rescue the butter from him, and then Keogh stumbled back and fell on the butter. Witness did not hear Keogh say he was a food inspector. John Cogan deposed that there was no margarine mixed with the roll of butter that the Inspector wanted a sample of. After Keogh had taken the butter off the scales he defied anybody to take it off him. When witness caught hold of Keogh to take the butter off him the butter fell on the ground and Keogh stumbled over a basket and fell against some boxes. Cross-examined by Mr. Rice.—He had never mixed margarine with butter. There were many houses in the city where the inspectors permitted this sort of thing, and there were cases where samples had been "lifted" from the City Hall. He had been convicted before under the Food and Drugs Act. What did you mean by saying you would commence at the top; I meant there were houses in the city allowed to do what they liked. Did you ask Sir Charles Cameron to withdraw this case? No, sir. Did you threaten Keogh in the presence of Sir Charles Cameron? No. Did you say all your friends in the Corporation were not out of it yet? Yes; and I will have this matter thrashed out.

Corroborative evidence having been given, Dr. Falconer submitted that if Keogh was refused a sample he was not entitled to possess himself of the bulk, because that was not "reasonably necessary" for his purpose. Moreover, Keogh, did not fulfil the conditions that would entitle him to the sample. Mr. Rice pressed for a severe penalty. It was an outrage and a slander that Cogan should suggest his friends in the Corporation would be so blind to their sense of duty as to help him out of this difficulty, or to threaten the Inspector with penalties for doing a duty that they ought to uphold him in carrying out. Mr. Swift reserved judgment.

At the Bury Police Court on November 16th, Elizabeth Mulloy, of Toad Street, Radcliffe, was summoned for selling margarine as butter. The defendant's husband, who recently was fined altogether £70 and costs for similar offences, has absconded, since when the defendant had carried on the business in—it was contended for the defence—a legitimate way. Evidence was given, and the magistrates fined the defendant £20 and costs. Superintendent Noblett stated that the defendant said she could not pay the fine, and as they had already tried to recover the £70 and costs from her husband by distraining upon his goods, but had found only about 30s. worth in the house, he asked for the defendant's commitment. The magistrates made an order for a distress warrant to be issued, returnable next morning. If sufficient value had not been found by that means, and the defendant would still not pay, she would have to go to gaol for two months. In the meantime she was detained in custody.

MILK.

At Highgate Petty Sessions, The Manor Farm Dairy Company, Ltd., were summoned for selling milk which was deficient in fat to the extent of 15 per cent.—Mr. A. L. Bridge, inspector under the Food and Drugs Act, prosecuted, and Mr. W. T. Ricketts, solicitor, defended.—Mr. Bridge said that on October 7th he purchased from the company's East Finchley depot a pint of milk, for which he paid 2d. Having told the young lady who served him that he had purchased the milk for purposes of analysis, he divided it into the customary three parts, and hermetically sealed the bottles in her presence. One sample was sent to the public analyst, whose certificate showed that the milk was deficient in fat to the extent of 15 per cent.—Mr. Ricketts said he based his defence on the section of the Act which protected innocent sellers who had been imposed upon. The milk, of which that purchased by the inspector formed a part, was purchased by the company from a farmer at Stevenage, named Hunter. Between the parties there was a contract, under the terms of which Hunter engaged to supply pure, new, sweet, marketable milk with all its cream, to be delivered twice daily at East Finchley. A warranty was given to that effect. On the morning of the 7th October, two churns, containing together $10\frac{1}{2}$ barn gallons, were received from Hunter. It was delivered by a carrier to a milk foreman employed by the company, and subsequently three quarts were left at the East Finchley depot in exactly the same condition as when first received. From time to time the company had submitted samples of the milk supplied by Hunter to a public analyst, and hitherto it had always been satisfactory.—George May, a carrier, in the employ of the company, said that he took the two churns from the station to James Keating, a dairy foreman. Both churns were sealed with string and wax, and one of them bore the warranty produced.—James Keating stated that both churns were sealed when they were delivered to him by the previous witness. After stirring and straining the milk he served $8\frac{1}{2}$ gallons to a carrier named Weston to deliver on his rounds. Weston would have to leave three quarts at the East Finchley depot.—Replying to the Bench witness said he strained the milk through muslin in order to separate from it any dirt or other foreign matter. No cream would be separated by the process of straining.—

Blanche Hopkins, the young lady who served Mr. Bridge, deposed to receiving three quarts of milk from Weston at about half-past seven in the morning. Mr. Bridge called between half-past nine and ten. She sold it just as she received it.—The carrier, Weston, having given evidence as to the delivery of the milk at the East Finchley depôt, Mr. Walter Stokes, a public analyst, said he frequently received samples of milk for analysis from the company—as often as three or four times a week. In the course of a year he would receive perhaps 500 samples from them. It was very rarely indeed that he found the milk not up to standard. The company demanded that their milk should be of a higher standard than that insisted on by the Act.—Ernest Alfred Lane, a managing director of the company, deposed to signing the contract with Hunter.—This concluded the evidence, and after the Bench had heard Mr. Bridge and Mr. Ricketts on the points of law involved, Dr. Orton stated that they had decided to dismiss the summons.

UNSOUND CONDENSED MILK.

AT Thames, Thomas Daley, of Woodstock Road, Poplar, was summoned for selling to Edward W. Morland 385 unsound tins of condensed milk. Mr. George Hay Young, who prosecuted on behalf of the Poplar Board of Works, said the summons was taken out under section 47 of the Public Health Act, and the defendant was charged with selling unsound tins of condensed milk to Edward Morland, a pastrycook, of Grundy Street. On a visit being made to those premises by Mr. J. W. Raymond, Factory Inspector for Poplar, a number of tins of condensed milk were seized, and afterwards condemned by order of the court. Although there could be no doubt about the purpose for which these tins had been purchased, it was thought advisable to make Morland a witness, in order that the person who put such things on the market might be punished. Defendant had been supplying Mr. Morland for twelve months, but the latter did not know his address. On October 14th the defendant left six cases at Morland's place, and when the accused called for the money he was followed to 32, Woodstock Road. The defendant was also seen to enter 94, High Street, Poplar, which was a baker's shop, and on a visit being paid there three boxes of condensed milk which was unsound were found. On November 1st visits were paid to shops kept by a Mr. Dean, of 92, Crisp Street and Brick Lane, Bethnal Green, with the result that 71 bad tins were found at the former place and 43 tins, in a similar condition, at the other shop. The Mile End authorities also seized 89 tins at a shop in Bromehead street. He should be able to call evidence to show that all these cases came from Messrs. Lehman, who were large importers. This firm paid and entered into a contract with a man named Worsfold to take away all bad tins and destroy the contents. After the summons had been served on the defendant, he was seen to go to Worsfold's house in Wellington Road, thus showing there was some connexion between the two. Worsfold had large premises at Barking, where millions of tins were found. With regard to the price, the defendant got 3s. 6d. for a case of 72 tins, which was at the rate of $\frac{1}{2}$ d. a tin, while the cost of a case of good milk would be from 11s. 9d. to 15s. The difference proved that the defendant must have known what he was selling and the nature of the nefarious trade in which he was engaged. Mr. Morland, in giving evidence, said it was usual in the pastrycook trade to pay a very low price for condensed milk. During the cross-examination by Mr. Lilley of one of the witnesses Mr. Dickinson said, "I hope you are not going to suggest to me, Mr. Lilley, that pastry-cooks are licensed to poison." The defendant gave evidence, and in cross-examination stated that he had been in the service of a man named Long, who had worked for a person named Fells. None of the tins were blown when he sold them to Morland. He had obtained no milk from Worsfold. He could not remember where the cases came from. Mr.

Dickinson said the trafficking in unsound food was a disgusting and dangerous trade, and must be stamped out. To show the accused and others that they could not carry on such a nefarious trade, he would be fined £40 and £10 10s. costs, or, in default, three months' imprisonment.

THE INFLUENCE OF PASTURE ON MILK.

HAVING been requested to write a paper on this subject, I addressed a number of questions bearing upon it to gentlemen in various parts of the country, whose experience in milk production is well known. The following is a draft of the questions asked, viz :

1. Has the herbage and condition of pasture land much influence on the quantity and quality of milk produced ?
2. Do you prefer a pasture full of grass, or a short bite for milk production and cheese making ?
3. Do you prefer old established pastures or newly laid down land for the production of milk and cheese ?
4. Does draining pasture land add to the yield of milk ?
5. What grasses and clovers do you prefer to lay down pasture for cheese-making, and the approximate quantities of each ?
6. What manures do you prefer for pasture ?
7. What artificial foods given to dairy cattle during summer do you consider prove most beneficial to the pastures ?
8. Have you any experience of noxious weeds in pastures affecting the milk ?
9. Do you advise the occasional mowing of pasture land for hay ?
10. Is a dry summer or a wet one the most profitable for pasture ?

The replies to No. 1 question are almost uniformly in the affirmative, nearly every one advocating a high condition of land and pasture as certain to improve not only the quantity but the quality of the milk. Mr. Byrd (Tarporey) thinks the richer the herbage, the richer the milk, but that quantity of milk is regulated by the succulent nature of the grass. Mr. Cross (Ayrshire) is of opinion that the influence is more marked in the quality; while Mr. Gibbons (Bath) thinks that much more milk and that of richer quality will be obtained from cows grazed on deep fertile soils than on poorer lands, although the animals may have as much as they can eat, and the herbage be composed in both cases of almost identical clovers and grasses.

The replies to question 2 show a very general preference for a short bite of grass for milking cows, qualified nevertheless with the remark that the pastures should be good. Mr. Cross advocates frequent change of fields, so as to give each a few days to recuperate. Mr. H. R. Dutton (Tarporey) thinks full pastures are not so essential now as they were thirty years ago, as feeding stuffs are so cheap, a stock owner can easily resort to feeding if the season decurates. Mr. W. Dutton prefers a fairly good bite, with an accumulation of grass by September, unless cabbages or turnips are grown to feed the cows in the autumn.

In replying to No. 3 nearly all correspondents prefer old established pastures to newly laid down land for the production of milk and cheese. Mr. W. Dutton, however, prefers the new, if put down with proper seeds and liberally treated afterwards. He contends that such land will carry more stock, and the milk yield as much cheese as that produced from old established pasture. Mr. Cross, Mr. Pickford, and Mr. Corbett prefer old turf for cheese-making and new for milk selling, as a greater yield of milk per cow is obtainable from the latter. Mr. Gibbons is of opinion that as good cheese may be made from the one as the other.

Nearly all the correspondents show a strong belief in the operation of draining, as calculated to improve the herbage and add to the productiveness of the land and consequently to the yield of milk obtained, as it enables a greater head of stock to be kept; it, moreover, enables owners to turn out their cows earlier in the spring and allow them to remain to a later date on the pastures in the autumn, thus increasing the summer season, as it were, and reducing that of the winter.

The replies as to seeds used to lay down land intended to be grazed for cheese-making show a considerable variation in the practice followed in different districts, but some useful lessons may be culled from the practical experience of the writers. I observe in the replies a growing demand for "wild white" clover in mixtures of permanent seeds, and from experiments carried on within my own observation, both under the auspices of agricultural societies and of county council school farms, the avidity with which stock of all kinds graze this plant will, in the near future, lead farmers to give it a more prominent place in their permanent pasture mixtures. I note likewise a disposition in some to leave out perennial rye-grass, in others cocksfoot and timothy, as they are said to attempt to occupy the land exclusively, and that stock do not graze them well. It is, of course, impossible to lay down any rule for general adoption in the varying descriptions of soil and climate, but the following are the chief natural grasses and clovers that are preferred by the majority of correspondents, viz: Foxtail, meadow fescue, tall fescue, the meadow grasses, crested dogstail, timothy, cocksfoot, wild white clover, cow grass, alsike, red clover, Italian and perennial rye-grass.

In the replies to No. 6, *bones*, as might be expected, take the first place: basic slag and superphosphate are also recommended. Mr. Gibbons does not find the results from either basic slag or superphosphate to be so satisfactory as to encourage him to continue their use; he relies more upon farmyard manure and the improvement effected by feeding cattle with cake, and Mr. Cross endorses this latter opinion. Mr. Hall prefers farmyard manure mixed with road earth, and I know one Cheshire farm where this application brings about excellent results. Mr. Speir prefers farmyard manure generally, or a mixture of artificials, but states that no absolute rule can be laid down for all cases.

There is a very general consensus of opinion in favour of cotton cake given to cattle during the summer months as proving most beneficial to the pastures. Mr. Corbett (Nantwich) uses a mixture of cotton cake, rice meal, and sharps, and finds excellent results both to the milk yield and to the pastures. Mr. Cross states that decorticated cotton cake is most beneficial to the pastures, but it is difficult to make good cheese when using it, and he sinks everything to this end. Mr. Harrison (Rugby) gives no purchased artificial food, but provides a good supply of commod turnips to spread on the pastures every day during the autumn. Mr. Spensley (Leyburn) prefers a mixture of pea meal, Indian corn meal, and decorticated cotton cake in equal proportions.

It is somewhat remarkable, but none the less a matter for congratulation, that very few of the correspondents have had any experience of noxious weeds in pasture affecting the milk. Mr. Aston states that he had experience of noxious weeds or poisonous herbs growing on some dairy farms producing cheese of a most dangerous character, and the consequences in one case were of a very serious nature. Mr. Gibbons has had trouble with garlic and meadow saffron, but by continually weeding them out has very little now. Mr. Hall mentions "wild garlic" on the Mendip Hills, and another plant, locally called "Ramsons," with a leaf something like a tulip, as very injurious to milk. Mr. Nunnerley has known a large dairy of cheese terribly reduced in value by an unpleasant flavour caused by garlic or other injurious herbs in pasture. The remaining replies are in the negative.

Opinions are pretty equally divided as to the advisability or otherwise of occasionally mowing pasture land for hay. The Scotch replies are all in the negative; opinions from the south are equally divided, but the balance of evidence amongst the Cheshire correspondents is in favour of the practice, as tending to prevent the growth of weeds or coarse grass, and especially on occasions when the grass has overgrown the demands made upon it by the stock kept. The friends of the practice, however, suggest that a top-dressing be given to the land after the hay crop has been removed, so as to restore its fertility again.

The replies to No. 10 are largely regulated by the class of land occupied. If light soiled land a wet summer is preferred, and if strong clay land, a dry one, whilst others stipulate for the happy medium. It appears more than probable that, as during a dry summer the forces of nature in the land only partially expend themselves, and as a genial autumn usually succeeds such a season, the growth in pastures may be extended over a longer period, and considerable benefit thus derived from grass land during the aggregate year having a dry summer.

In summarising the information gathered from these replies, it will be admitted that the condition and herbage of pasture land has great influence on both the quantity and the quality of the milk obtained from cattle grazed upon it. Many scientists have been telling us that it is not possible to increase the amount of butter fat in milk by any method of feeding with artificial foods, however rich and concentrated these foods may be. Practical dairymen have frequently traversed this opinion, and it would appear from the evidence deduced from these replies that the conditions of pastures even, and the natural food obtained by cows from pasture alone, is sufficient to influence the richness of the milk.

That superior herbage and fertility in pasture land should favourably influence the quantity of milk per head no one would probably dispute: but the tenor of these replies undoubtedly shows that the quality or richness of milk is also influenced in an equal, if not in a greater degree; and, as scientists have in recent years proved for us that we need not go to the expense of supplying dairy cows with highly nitrogeous foods, but that a simpler diet of cereal corn or bran will suffice for a full flow of milk, so does the evidence of practical dairy farmers lead us up to the opinion that by careful attention our pastures may be so improved and maintained in such a state of fertility as to command excellent financial results both to the cheese-maker and milk-seller.

There are many advocates nowadays for dairy farmers turning out their cows much earlier in the spring than used to be the case. By this means they keep pace with the grass, and pastures do not overgrow the demands of the stock at a later date in the year as they sometimes do if kept in the stalls until the pastures become full. It is a simple matter to help cows with cake or corn for a week or two should the season prove later than expectation, the comfort and health of the cattle is manifestly greater and their yield of milk increased. C. B. DAVIES in *Journal of the British Dairy Farmers' Association*.

PROCEEDINGS OF THE DEPARTMENTAL COMMITTEE ON FOOD PRESERVATIVES.

THIS Committee began its sittings on November 14th, the first witness examined being Mr. John Kellitt, representing the Grocer's Federation and Fowler Bros., Ltd., Liverpool. Mr. Kellitt has forty years experience of the trade.

Mr. Kellitt supported the use of borax and used it to dust the bacon, to prevent slime and fly blowing. If the use of borax in hams and bacon were prohibited and the trade had to go back to the old salt cured article the

public would not eat it. It was the same with butter, the public would not use the salt butter as sold thirty years ago. In the case of hams from America they were kept from three to six weeks in borax, the borax being washed off by the retailer.

Captain Sanders, J.P., representing the Irish creameries, said he used 1 lb. of boracic acid to every 112 lbs. of butter, and it would be impossible to go back to the use of salt. Some of the butter must be kept nearly a month. To test the need for preservatives the butter merchants of Limerick made an experiment. They made a large churning of butter of 112 lbs., and divided it into four equal lots. No. 1 lot was cured with 1 lb. of preservative; No. 2 with 1 per cent. of preservative and 3 per cent. of salt; No. 3 with 3 per cent. of salt; and No. 4 with 6 per cent. of salt. They packed them in exactly similar boxes and stored them for nine months. At the end of nine months Nos. 1 and 2 were eatable, but Nos. 3 and 4 were not eatable.

Mr. Wheeler Bennett, on behalf of the London Chamber of Commerce, stated he had 35 years experience of the provision trade. Four ounces of borax per side of 56 lbs. was sprinkled on the surface of Canadian bacon, which when it arrives in England is washed and scrubbed back and front. In Mr. Bennett's opinion the consumer got it practically free from borax. Eighty per cent. was washed away. In winter time he thought it was all washed away. He had eaten borax for over twenty years and felt all right. Without borax the trade could not be carried on, the public would not eat the heavily salted bacon or ham. He had tested this over and over again and the prohibition of the use of borax would kill the Colonial trade. No borax in solution was ever injected into the meat. French butter is put in a cloth washed in a solution of borax and this is also done with butter from the Antipodes.

On November 15th Mr. Dale, representing Messrs. Cleer and Co., Cork, and the Cork Butter Association, of which he is president, said in his trade he used $\frac{3}{4}$ per cent. mixed with salt and sprinkled over the butter before it is blended. Unsalted butter would not keep for 24 hours without using preservative. The drug he used was preservitas, which was soluble. For colouring, so far as he knew, only vegetable matters were used. The use of salt as a preservative was largely discontinued, because butter so preserved could not be disposed of satisfactorily. The demand was for butter with good keeping qualities, and, at the same time, not heavily salted. The prohibition of other preservatives, as Alderman Dale said, would injure the Irish trade very seriously, especially at a time when every effort was being made to restore to Irish butter the reputation it once enjoyed.

Mr. Henry Shanahan, managing director of the Cork and Kerry Creamery Company, said they bought the butter fresh from the farmer, and washed and got the buttermilk out of it, and then they had a machine for getting the water out. They applied the preservatives on the butter table after it came from the squeezer. They applied it, as Alderman Dale had stated, until there was a row made that boracic acid was injurious to health, and then they were very cautious that there was not more than .5 per cent. used. In the factory they uniformly used $\frac{1}{2}$ per cent., but they did not mix it with the salt. They put it on the butter by it itself. The use of preservatives was essential to the Irish butter trade. Without them farmers would often get only 4d. or 5d. per lb. At present they had so improved Irish creamery butter that it was better than Danish.

Mr. James Hudson, of Hudson Bros., Ltd., London, said he remembered butter containing 6 per cent. of salt, and now only 1 to 2 per cent. was used. He thought $\frac{1}{2}$ per cent. of preservative enough, and should be glad to see a law passed to that effect. He allowed no more in any butter he bought. He found Irish, Colonial, and Normandy butter better than Danish and used very little Danish of late. The prohibition of the use of preservatives would seriously injure the Irish and Colonial trade; at the

present time the Irish butter trade is becoming a great thing for that country and increasing rapidly. The quality of creamery butter from Ireland is better than ever produced before and without preservatives that trade would be killed. Canadian butter kept in cold storage came out as perfect as when put in, but butter without preservatives would go off at once when taken out of the cold stores.

On November 16th, Mr. J. E. Prossor, formerly manager to the Yorkshire Bacon Company, and now manager for Rehoe, Donnelly, and Packenham, ham and bacon curers, Dublin, said that as a preservative he chiefly used an antiseptic, which was, he believed, a mixture of boracic acid and borax. As an experiment he had, every morning for three months, taken half a teaspoonful of boracic acid in a glass of water, and had found no ill effects from it whatever. He thought it had very much the same effect as pepsine. His children ate meat covered with preservative with no ill effect.

Mr. Henry Trengrouse, a witness selected by the London Chamber of Commerce, said that his firm represented the great packing house of Armour and Co., Chicago. There had been, he said, quite a revolution in the trade, which had led to the adoption of mildly cured bacon and other pork products. His firm were the pioneers of the Australasian butter industry. The butter was brought in cold chambers, unsalted, from New Zealand and Australia, but it had a little boracic acid in it, which was thoroughly incorporated with the substance of the butter. Some of it was now practically equal to Danish butter; but it did not obtain the Dutch price by a long way. Brittany butter commanded the highest price, because it was so fresh and delicate, but Danish butter was chiefly used by the ordinary middle-class consumer. Australasian butter had seriously interfered with the Danish trade.

Mr. John Lovell, of the firm of Lovell and Christmas (Limited), advocated the prohibition of an excessive use of a preservative. The use of one-half per cent. of preservative had been ascertained to be perfectly harmless, but to overdose butter with a large quantity would be absolutely wrong. Nothing would do the butter business more mischief than to stop the use of a moderate quantity of preservative. Entire prohibition would exclude at least 30 to 40 per cent. of the fine fresh butter that now came into this country, and it would also raise the price of butter by 3d. or 4d. a lb. The finest butter which came to London through the winter months came from Auckland, New Zealand.

Mr. James Riley, representing the Liverpool Chamber of Commerce, said that if butter was made on the latest scientific principles there was not the slightest necessity for any preservative matter. In Denmark preservatives were forbidden, and his experience had been that Danish butter kept as well as, if not better than, any other class of butter.

On November 17th, Mr. Charles Gregson, director of Messrs. John Morrell and Co. (Limited), pork packers and importers, Liverpool, said that 30 years ago boracic acid and borax were not used in the pork trade. About 25 years ago borax was used in a very small proportion, and since that time the proportion had grown from year to year. The public seemed to require mild-cured meats, which could not be produced without boracic acid and borax. The Liverpool Provision Trade Association had obtained statistics from different importers, and the result of the investigation was that about 25 per cent. of American and Canadian meats came in salt and 75 per cent. in borax. According to the returns of the packers, the bacon was boraxed about 1 per cent., and then in ordinary weather it would keep a month, but, of course, the meat was better when used fresher. The borax was merely on the surface, and it was washed off on arrival in England. From a commercial standpoint the Liverpool Provision Trade Association were not advocates of borax. They were simply giving the public and the trade what they wished.

Mr. S. G. Sinclair, of Messrs. W. P. Sinclair & Co., Liverpool, said that it was a most exceptional thing to have any salt-packed meat from Canada. The Canadian bacon was very mild and was intended to compete with the Danish bacon.

Mr. Leonard K. Boseley, analyst to Messrs. Keiller and Sons (Limited), and formerly analyst to the Aylesbury Dairy Company, said that milk, cream, butter, and condensed milk were most frequently treated with borax, boracic acid, formalin, very occasionally with salicylic acid, and also with nitrates and sulphites. The Aylesbury Dairy Co., from 6½ years ago, had used no preservatives in any article except in a certain kind of potted cream, and that, owing to the action taken by analysts against preservatives, was stopped about four years ago. He believed that the company's opinion was that they were perfectly prepared to run their business without preservatives at all. About 50 per cent. of the dairymen in London used a preservative of some sort.

Messrs. Keiller and Sons used neither preservatives nor colouring matters in their jams and marmalade. About 50 per cent., however, of English jam manufacturers did use a preservative, usually salicylic acid. Domestic jam was generally made by cooking the fruit for about two hours over a fire; but the wholesale jam-maker cooked it in copper pans, sometimes lined with silver, by steam pressure, the time taken being five minutes. If jam made in a wholesale way were boiled over a fire for a long time they would undoubtedly get a nice-tasting article, but the sugar would be burnt brown, and they would not be able to sell any of it, because the public bought jams entirely on appearance. Apricot jam was made entirely from foreign pulps, mostly Spanish, and, he thought, Australian. He believed that imitation Demerara sugar, which was made up from beet sugar, was treated with aniline dyes, that sulphuric acid in the proportion of 4oz. to a 40-gallon barrel was put into pickled cabbage in order to give it a bright red colour, and that turmeric was put into piccolilli as a colouring.

On November 20th, Mr. J. W. Copeman, general manager of Petty, Wood, and Co., wholesale grocers, and the representative of the preserved food section of the London Chamber of Commerce, was the first witness. Dealing with preservatives used in the grocery trade he said that vegetables were generally preserved with salt, saltpetre, sugar, oil, vinegar, and glucose. With regard to colouring matters sulphur was generally used in dry fruits. The sulphur was used in small quantities, and it gave an artificial bloom to Carlsbad plums, for instance. Cochineal was used in many articles, such as jams, jellies, and so on; in fact preserved cherries in bottles could not be sold without cochineal. Copper was used in colouring greengages, peas, and beans. The public would not buy these articles unless they were artificially coloured. Then sulphate of copper imparted a bright green to peas and beans, and the people would not buy them unless they were so coloured. Preserved vegetables coloured by sulphate of copper were eaten in all the leading hotels, restaurants, and clubs in London, but no one had been injured in health by the colouring matter. In a recent inquiry into deaths in a London hotel it was never suggested that coloured vegetables had anything to do with them. The London Chamber advocated the imposition of a *maximum* quantity of sulphate of copper, say, two grains to a pound of peas. He knew there were a great many people who avoided preserved fruits, but it was merely a prejudice. The trade would agree to the preserved vegetables being labelled "These goods are artificially coloured;" but it would be difficult to say that a certain bottle contained so many grains of sulphate of copper. Asked by the Chairman if, on the use of strong poisons for colouring matter being prohibited altogether, the public would not be reconciled to buying things off colour, the witness said the public would rather do without them than have them of a pale colour.

Mr. Howard Jones, Medical Officer of Health, Newport, said people were taking considerable quantities of drugs in their food, and especially in milk. He considered the use

of borax, salts, and formalin was not necessary in milk, and they were a source of danger, particularly to children and invalids. The use of boric acid in milk was prohibited altogether in Newport.

Dr. Briggs Wild, honorary physician to the Manchester and Salford Hospital for Skin Diseases, said he had been experimenting with boric acid on himself and friends, and patients in whose case boric acid was a proper treatment. In small quantities the kidneys should dispose of it, but it had a tendency to accumulate. In large quantities (used only on himself) it resulted in a loss of appetite and lassitude. He considered that milk should be certified free from boric acid, as it affected the digestive faculties of weak children and babies.

WHAT IS GENUINE BRANDY?

THIS question is of some importance in medicine, since brandy is so frequently relied upon as a stimulant and restorative in cases of collapse. Some hold that the stimulating and restorative effect is referable chiefly to the alcohol, but there can be no doubt that these effects are enhanced or diminished by a greater or less proportion of other bodies, chiefly of the ether type. The product of the fermentation of grain like malt, rice, and maize is singularly destitute in these secondary ethereal bodies, which are elaborated in important quantity during the fermentation of grape juice; in other words, in the alcohol derived from grape juice there are so-called wine ethers, while in the alcohol from grain these bodies are conspicuous by their absence. To some extent, therefore, a wine spirit can be differentiated from a corn spirit by chemical analysis. Clinically, this point of difference in regard to ethers is of some importance. The stimulating effects of ethers are well known, and it is conceivable that when the ethers are exhibited in alcohol their effect is increased. Brandy, we maintain, should be the spirit distilled from wine, but now-a-days this is the exception rather than the rule. It is easy to flavour a spirit derived exclusively from grain which on tasting gives the impression of being genuine brandy. It will be less ethereal, if ethereal at all, than grape-derived spirit, and *a priori* a less powerful restorative. In medicine, therefore, the question of what is and what is not brandy is a serious one. For purely medicinal purposes it is desirable that the spirit used should be derived from the grape, and contain, therefore, those ethers which in association with alcohol may make all the difference, whether collapse is successfully or unsuccessfully withstood. We have pointed out again and again that, in spite of the ravages of the phylloxera in the Charente district in France, which commenced in 1876, the importation of "cognac" for this country increased rather than diminished, which leads to but one conclusion, viz., that this increase could only be due to the importation of fictitious brandy. It is only comparatively recently that the celebrated French vineyards have recovered, and it is to be hoped that the importation of genuine brandy from this district may be re-established. We have dealt with consular reports from time to time showing how impossible it was that France could be exporting genuine wine spirit into this country. In the meantime we drew attention to the fact that excellent brandy and genuine wine spirit could be obtained from Australia, California, and Spain in abundant quantity and at a moderate price. Of course, it could not correctly be called cognac, but such a spirit has undoubtedly a greater claim to the term "brandy" in the sense in which we have defined it than the bulk of spirit sold in this country under that name. This is a fact which we have placed before our readers for some years, as a reference to our columns and to the Analytical Records of the *Lancet* Laboratory will show. The subject was discussed with greater detail in the *Lancet* Analytical Commission on Sherry, in which incidentally it was shown that wine spirit was produced in Spain in abundant quantity and of excellent quality, one of our Commissioners having inspected the processes of distillation on a large scale in the Jerez district.—*Lancet*.

STERILIZED MILK AND INFANT MORTALITY.

THE St. Helen's Corporation, Lancashire, having undertaken the sale of sterilized milk, with the view of reducing the infant mortality, appointed a special committee to visit towns in France where such steps have already been taken, and through the courtesy of Dr. Harris, the medical officer, "The Municipal Journal and London" is enabled to give the following special report of the committee:

The committee visited Fecamp, a little Normandy town of about 14,000 inhabitants, not far from Dieppe. Here a society, initiated by the medical officer of health, for producing and selling sterilized humanised milk, was started some five years ago, and the experiment, as ascertained from carefully compiled statistics, has resulted in a decrease of infant mortality from 24.3 to 1.40 per 1,000 births. It is a philanthropic society, managed by the medical officer of health and three lady superintendents, and is carried on in a small house, in charge of a woman, who carries out all the work of mixing, sterilizing, and distributing to the customers. The committee were fortunate enough to have the presence of two lady superintendents during their visit, and from them obtained the fullest information as to its history, its method of working, and its advantages.

The object is to secure to each infant, not nursed by its mother, a supply of humanised milk each day, in such quantities as its age demands, and the mode of operation is as follows:—The milk on arrival is mixed in the proportion of two-thirds milk to one-third water, with the proper quantities of cream, sugar, and salt, the exact proportions being communicated to the medical officer of health.

Specially-made bottles, which have china stoppers, with pure rubber joints, held in position by steel wire grips, are thoroughly cleansed and sterilised, and the milk mixed as above, is then put into them in measured quantities. The bottles are retained in baskets of tin or steel wire, in sets of nine, each basket having a numbered tag attached to it to identify to which child that particular set of bottles belongs, and the quantity of milk required in each. The bottles are then securely corked and placed in a vertical sterilizer of about 3ft. diameter, which has five compartments, capable of holding 100 bottles in each compartment. The handholes to each compartment are then screwed down and made steam tight, a quick and easy method being adopted; the small boiler underneath is acted upon by the fire in the grate, and steam is rapidly given off. As soon as the thermometer registers the boiling point the time is noted, and a pressure of 2lbs. to 4lbs. per square inch then maintained for 45 minutes, after which it is allowed to cool down, and the milk is ready for distribution; the whole operation of mixing and sterilising occupies rather less than two hours for 500 bottles. The baskets of bottles are then taken out and placed in numbered positions on shelves representing the individual child, and on each bottle a numbered label is placed corresponding to that on the basket.

During the day the mother or some member of the family comes for the daily supply, and on returning the nine bottles taken the previous day, is given in exchange the newly-filled nine that have been prepared. Each child has, therefore, two sets of nine bottles, which are used on alternate days, and used only by the child whose registered number is on the bottles and baskets. The mothers have short rubber teats to fit to the mouth of the bottle, and these teats are brought from time to time for inspection to the woman in charge, that she may see that they are clean and sweet. The nine bottles represent nine feeds per day for the baby, in such quantities as its age demands.

The table of quantities according to age and size, has been most carefully worked out from the results of experience, and this graduated table has been handed to the medical officer of health. All the milk supplied is charged for, but on a graduated scale according to the pecuniary ability of the parent, in the judgment of the lady superintendents. Some families pay 1d. per day's supply, while it rises in some cases to 6d. per day's supply.

The children are brought weekly for inspection by the

medical officer of health or other medical men, who weigh and measure them and record their progress, and vary the quantity of milk as occasion demands. These inspections are said to be of great value in other respects, as mothers pride themselves in the development of the child, and vie with each other as to its cleanly and healthy condition. The medical men at Fecamp recommend mothers to use humanised milk if they cannot nurse their infant, and the ladies' society assist in promoting its usefulness and success. In addition to the details of working, the committee also ascertained, by close questioning, the extent to which it has been found possible to get the people generally to take the matter up, and report that no difficulty is experienced, even among the poorer classes.

The committee then visited Havre, a town nearly ten times the size of Fecamp, and in which a similar society to supply sterilized humanised milk has been started. The committee considered that Havre, being a larger town, and having more resources at its command, would present new features, and possibly a better comparison for St. Helens; and through the courtesy of Dr. Caron, the medical superintendent, a great deal of valuable technical information was obtained. The operation of mixing, humanising, sterilizing, and distribution, was the same as at Fecamp, except that here they had a messenger to take the humanised milk to some of the houses, for which a higher rate was charged. Dr. Caron informed the committee that the society was a philanthropic one, and all the plant and appliances bought by subscription, and that any deficiency would be made up by subscription. The work of the society is being increasingly recognised, and though it had only worked for some four or five months, there was a marked improvement in the children who used it. Further, the municipal authority were already so impressed with its usefulness that they were about to subscribe to its funds, as was also the Departmental Council. Dr. Caron informed the committee that he and his colleagues were satisfied with the success attending the use of sterilized humanised milk in the reduction of infantile mortality, especially from diarrhoea, rickets, and consumption of the bowels.

The members of the medical profession assisted Dr. Caron in turns in the working of the society. When a child is brought to them for a first supply it has a registered number given to it, a short history of its parents and of itself is entered, with its length and weight, each child has a chart with a theoretical line for weight, and this chart is marked every time the child is inspected. In no case is the quality varied, though the quantity may, if occasion arise. Mothers came quite voluntarily, and while they have as yet only 65 children on the books, they propose, in order to meet the increasing demand, to extend their operations, immediately the woman in charge can undertake the work.

The ladies associated with the society seek out needy people, and give them tickets entitling them to supplies of milk, but no one is allowed to become an occasional customer. They must be constant during the needs of the child. Dr. Caron was good enough to give, in great detail, his method of testing milk on arrival of which careful note has been taken by the medical officer of health, who has also obtained the forms used by Dr. Caron for entering the names and circumstances of the children's parents, for the purpose of ascertaining the means of the parents, on which the charges made were regulated as follows:—Poor people were asked 1d. per day's supply; mechanics, 3d.; well-to-do people, 10d. The milk used by Dr. Caron is required to have not less than nine per cent. or more than twelve per cent. of cream, ten per cent. being the ideal quantity.

The committee also visited Rouen, but at present nothing is actually done there in the way of humanising milk, though it is under consideration; but here, and also at Havre, the committee found that sterilized milk is largely used, scarcely any condensed or other milk being sold—the people preferring the sterilized milk in bottles, which they buy from the provision merchants, druggists, &c.

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Food and Sanitation.

SATURDAY, DECEMBER 2, 1899.

SALICYLIC ACID IN FOOD.

If there be one question about which it was thought medical men were generally agreed it was the need for preventing the surreptitious drugging of food by salicylic acid. The condemnation and prohibition of its use in France resulted from the most careful enquiries, and was not lightly undertaken because it admittedly interfered with large trade interests. That this action was a right one was shown by the prohibition being followed by other countries, and if one thing seemed certain it was that no

medical man would be found recommending so improper a use of a powerful drug. The modern "Expert witness," however, appears to have no qualms of conscience about drugging the food of the public without the consumer's knowledge or consent, his business apparently is to defend any abomination in amateur drugging or food poisoning, provided the "insult" is like "Pooh Bah's," large enough. He would be the first to object to the indiscriminate use of the same prescription, and to utter the needed warning that no two constitutions are alike, and what one will tolerate in drugs another finds dangerous, but in sight of a large fee he will not hesitate to swear in court that because he has taken this or the other drug in certain doses for a week or more its use is to be generally recommended. Such evidence is beneath contempt.

MILK.

At Maidstone, on November 14th, Alfred Ongley was summoned for selling adulterated milk on the 13th October. Mr. H. J. Bracher was for the defence, and Mr. L. Monckton, the deputy town clerk, prosecuted. According to Mr. Adam's analysis the milk was adulterated with 14.5 of added water. The analyst said his opinion as to the added water was based upon the fact that the sample contained only 7.27 parts per cent. of non fatty solids, whereas normal milk contained at least 8.5 parts per cent. of such solids. Mr. Jackling said the defendant told him he could not account for the pooriness unless it was caused by the grains. Mr. Bracher said he should call witnesses who would declare that not a drop of water had been added to the milk. Commenting on the analysis he asked: What did Mr. Adams' evidence amount to after all? Because he didn't find a certain per centage of solids in this sample he came to the conclusion that water had been added to the milk. It was well-known, however, that solids in milk varied very considerably, and the bench ought not therefore to convict his client simply on Mr. Adams' certificate. Mr. Ongley and Thos. Fowler, who milked the cows on the day named, swore that no water was added to the milk, and Henry Buss, who took the milk to defendant's shop in Week street, and Mary White, who sold the sample to Mr. Jackling, gave similar evidence. The magistrates, however, decided that they were bound to convict on the analyst's certificate, and inflicted a fine of 20s., and 13s. costs. It is a wrong decision, because no water has been added to the milk.

Milk Preservatives—A Protest at Northampton.

THE Sanitary Committee's report stated that an application had been made to the magistrates for a summons against a person for adulterating milk by the addition of boric acid to the extent of 16 grains to the gallon. The bench were of opinion that such adulteration was of no consequence; and the application was therefore not insisted upon. Mr. Wetherell, as a member of the Sanitary Committee, did not believe it was a proper thing to adulterate milk with boric acid, more especially to the amount in this case. It should be known that the responsibility rested, not on the Sanitary Committee, but on the magistrates. Mr. Tomes, seconding, said that the whole thing would be reconsidered at another meeting. Mr. Phillips understood that a small quantity of boric acid was a preservative. Mr. Tomes said that the quantity used was 0.1 per cent. Mr. Milligan said that boric acid was a drug, and was used medicinally, and if given for a long time it was considered injurious to health. He could not help thinking that the question ought to be reconsidered very carefully by the august body, which he mentioned with dread. (Laughter). The

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ex-mayor said that no member of the council sat on the bench when the application was made, so they were free from blame. Mr. Campion thought no doubt the question would be reconsidered, and very properly so: it was very clear it ought not to be allowed to rest if the adulteration was to a very serious extent. Mr. Hickson asked why the Committee did not go to the High Court to obtain a mandamus to compel the magistrates to issue a summons. It was a very serious matter indeed. Mr. Wetherell said that the amount of boric acid put into the milk was more than a dose for an adult; and if the infants were fed on food adulterated in that way no wonder infant life was prejudiced and decreased in the town. (Hear, hear). As milk preservatives were not so much required in the winter the Committee could not take any further steps at present for putting an end to this dangerous practice. The report was agreed to.

How Unsound Tinned Milk is Used.

At Thames, on November 24th, Betsy Jacobs, confectioner, of High Street, Poplar, was summoned for having in her possession a quantity of condensed milk which was unsound. Mr. Young prosecuted; and Mr. Watt, barrister, defended. On October 26th the medical officer and Mr. Bullock went to 94, High Street, Poplar, which was a pastrycook's shop, but at the time of the visit the place was closed. In a loft, over the bakehouse, was a large quantity of flour, sugar, tubs of margarine, currants, cocoa-nuts, and three cases of condensed milk, containing 216 tins. Nearly all the tins were blown, and on the doctor remarking on that fact the defendant said they were bad and had been left there by the last tenant. She also stated that she was going to ask the dustman to take them away. The cases of milk were seized and brought to this court, where an order was made for them to be destroyed. In the course of the investigation against a man named Daley, who had been convicted of dealing in bad tinned food, it was proved that the defendant's statement was untrue, for the cases did not come to this country until after the last tenant left. It was also proved that the cases of milk had been taken from a merchant's warehouse for the purpose of being destroyed by a man named Benjamin Worsfold, who had been paid for doing it. Miss Jacobs, in her evidence, said her business was known as the Tip-Top Cake Company, but she denied that she was the owner also of the Tower Hamlets Cake Company and the Novelty Cake Company. Mr. Dickinson, having heard a number of witnesses for the defence, said it was absurd to suggest that the cases were on the premises when the accused took possession, and he had not the smallest doubt the milk was intended to be used in the manufacture of pastry. The defendant would be fined £10 10s. and £5 5s. costs, or in default of distress, six weeks' imprisonment.

MARGARINE PROSECUTIONS.

At Bishop Auckland, on November 17th, Lawson Brothers, Newcastle-upon-Tyne, trading as the Danish Butter Company, were summoned before the Auckland magistrates for selling margarine without having it labelled, in accordance with the Margarine Act. Mr. M. A. Thompson, food and drugs inspector, stated that when at Coundon on the 13th inst. he saw an employé of the defendant company hawking margarine, a pound of which he bought from him, and then pointed out to him that it was not properly labelled. Mr. S. G. Ward, of Newcastle, who appeared for the defendants, said the offence in respect of which they were charged was for exposing the margarine for sale. This had not been the case, and he produced the wrapper in which the margarine was contained when sold to the inspector, to show that the requirements of the law had been fulfilled. The case was dismissed.

At Aston, on November 22nd, Walter Samuel Woolston, 80, Lichfield Road, was summoned for selling $\frac{1}{2}$ -lb. of "butter," which, on analysis, was found to contain 90 per cent. of foreign fat. Mr. Woolston said that his manager, John Kendle, was responsible for the sale, and, Kendle being in court, the summons was altered by consent. The case was proved by Mr. B. Bolt (Inspector under the Food and Drugs Act to the Aston District Council), who sent a lad named Jackson into the shop for "half a pound of shilling butter." The defendant admitted the offence, and said he had previously sold $1\frac{1}{2}$ -lb. of Australian butter to a lady, but she returned it. He then offered her the margarine, which she tasted and approved, and he supplied her with it. He did not tell her that it was margarine, or she would not have had it. He had more shilling butter in the cellar, but he was busy when Jackson entered, so he also supplied him from the margarine. The magistrates said that he committed the offence deliberately, and imposed a fine of £5 and costs.—William Gordon Bailey, grocer, Victoria Road, was summoned for a similar offence. In this case the result of the analysis showed that the material contained 90 per cent. of foreign fat. The defendant admitted having served the lad, but said he recognised that he had made a mistake, and, jumping over the counter, went after the lad, but just as he reached the door, Mr. Bolt came in. His son had, unknown to him, changed the positions of the butter and margarine. The magistrates thought a mistake might have been made, but said it was a very stupid error, and fined the defendant 40s. and costs.

At Bolton Police Court on November 23rd, Mary Jane Rawes, grocer, Church Street, Horwick, was charged with selling adulterated butter. Mr. Fielding prosecuted on behalf of Mr. W. J. Parkinson, Inspector of the Lancashire County Council, and Mr. F. A. Horridge defended. Mr. Fielding explained that Mr. Parkinson purchased a pound of butter from the defendant and paid 1s. for it. On analysis this was shown to contain 80 per cent. of foreign fats, and 11 per cent. of water. The defence, he thought, would be that they had a warranty from the wholesale dealer, but that warranty was simply the invoice, and he held it was no guarantee. Mrs. Rawes told the inspector she paid 11d. per lb. for the butter. The public were, however, being defrauded, and ought to be protected. She had her remedy by suing the wholesale dealer. Mr. Parkinson corroborated. Mr. Horridge submitted that the invoice was a warranty. The words guarantee and warranted were not required, and quoted a case in support. Mr. Fielding said Mr. Horridge's case did not apply, and contended that the invoice was no warranty. Mr. Horridge remarked that if the magistrates were against him on this point he hoped they would dismiss the case, even if they found her legally but not morally guilty. The woman was a widow, and the business had been conducted for 30 years without complaint. Mrs. Rawes said she ordered 6 lbs. of butter from a representative of Messrs. C. & M. Connolly, Bolton, and from this she sold the inspector a pound.

She had dealt in this class of butter for two years, and had been trading with the above firm fourteen years. She did not buy margarine. A discussion ensued about the reading of a letter, and Mr. Foley, who held a watching brief on behalf of Messrs. C. & M. Connolly, Bolton, asked for permission to speak, but Mr. Fielding objected, and the Magistrates upheld the objection. It was decided that the letter, which was signed C. Connolly, should be read. It set forth that "he regretted that the butter had turned out as it had, and he could not explain how it was unless a mistake had been made. The man who had been going in his place had gone to Ireland, and he was in the dark. He had seen Mr. Folly, and requested him to see defendant. He added that he would pay whatever it cost." The Magistrates held that the defendant was really guilty of selling margarine as butter, and would be fined £3 and costs and advocate's fee, which she would probably get back from the wholesale dealer. Mr. Horridge asked the Magistrates to give an expression which would exonerate his client from blame, so as not to injure her business, she being a widow. The Magistrates said they were agreed that the woman had done nothing morally wrong.—William Edge, of Farnworth, was fined 20s. and costs, which include advocate's fee, for not having his margarine properly labelled. Mr. Fielding prosecuted.

At Birmingham, on November 24th, Horatio Morgan, 96, Armoury Road, Small Heath, was summoned for selling margarine without wrapping it in a properly-labelled paper, as required by the Margarine Act. Mr. Philip Baker, defended. Inspector Jones purchased some "butter" from the defendant's shop, which, on analysis, was found to be margarine. Mr. Baker pointed out that the defendant purchased the mixture from Mr. W. R. Allcock, wholesale stores, 429, Coventry Road. He ordered pure butter, and believed that it was pure. He paid 10d. per lb. for it, and on the delivery note it was stated to be butter; but when defendant told Mr. Allcock that a sample had been taken by the inspector, Mr. Allcock sent an invoice, stating that the consignment was a mixture. The defendant gave evidence, and said that he never sold margarine. It was his intention to prosecute the wholesale dealer, and Inspector Parker said that he would render every assistance. Mr. Fisher said that the magistrates were satisfied that it was not the defendant's fault, but the fault of the man he dealt with. The defendant had taken proper precautions—except that he might have obtained a guarantee. Mr. Allcock adopted what he may have thought was a very clever trick. That was the sort of man they wished to get hold of, and as the defendant was going to prosecute him they would inflict such a fine that would make him (Allcock) suffer, as he was the right person to suffer. The defendant had done right in exposing a man who was imposing upon confiding shopkeepers and making a profit out of them, leaving them to be punished. A fine of 60s. and costs would be imposed, and to show that they considered that the defendant was innocent they would allow him two months in which to pay the fine.—Harry Mills, Herbert Road, was fined £5 and costs for selling margarine without wrapping it in the properly labelled paper.—Alexander John Morris, Granville Street, was fined a similar amount for a like offence.

A CAMPHORATED OIL CASE.

How Retailers are Victimised.

At Durham, on November 15th, George Holmes and Alfred J. Richmond, of Darlington, were summoned under the Food and Drugs Act for selling adulterated camphorated oil. Mr. B. Scott Elder prosecuted, and Mr. Mawson represented the defendants, who pleaded guilty. Mr. Scott Elder said this was the first case in the North of England which had been taken under the particular section of the Act under which the defendants were charged. Messrs. Holmes and Richmond were wholesale druggists of Darlington, and they were charged with wrongfully giving a label with camphorated oil. As

Mr. Mawson had pleaded guilty it would save the time of the Court if he stated the facts very briefly. A sample of camphorated oil was taken from a tradesman in Waterhouses last month, and this sample on being analysed was found to contain 10·72 per cent. of rape oil, which was substituted for olive oil. He (Mr. Scott Elder) went to see the tradesman referred to, and from what he saw he formed the opinion that he was more sinned against than sinning. He produced bottles bearing the labels of the defendants, "camphorated oil," and he (Mr. Scott Elder) thought it was his duty to proceed at once against the wholesale firm who had compounded the oil. He would point out that before the consignment of the oil had left the defendants' premises one of their customers who a month before had had a sample taken, had communicated with them telling them it was adulterated. This customer appeared at that very court, and was fined £20, and yet after this the present oil had been sent out. He (Mr. Scott Elder) did not propose to call any evidence as Mr. Mawson had pleaded guilty. The Chairman: There was no olive oil at all in it. Mr. Scott Elder: None whatever. For the defence, Mr. Mawson said the defendants did not dispute the facts that had been stated, and they were very sorry the prosecution had come about. But what they said was this. Up to last year there was no standard for camphorated oil. When the standard came out, and defendants' attention was called to it, they started making small penny bottles of the oil, containing olive oil, in accordance with the standard. They then found it did not suit their trade, as the olive oil solidified too rapidly, and they constantly had complaints from their customers that the oil was not fit for using. Mr. Holmes had been a tradesman all his life, and he was of opinion that for the purposes for which camphorated oil was used, a preparation of it with colza oil, which was the oil used in the present sample, was as good for all practical purposes as olive oil. Camphor was the ingredient which was the most essential in the preparation, and the Bench would see from the analysis that in the present sample with regard to camphor the quantity was perfectly correct. The Chairman said the Act was passed in the interests of the public, and they were there to administer it. They therefore inflicted the full penalty of £20. There was a charge against James Dalkin, of Waterhouses, for retailing the sample of olive oil in question. This Mr. Scott Elder withdrew with the permission of the bench.

WATER AT SPIRIT PRICE.

Significant Remarks by the Magistrates.

At Durham, on November 15th, George William Parkinson, Black Horse, Waterhouses, was summoned under the Food and Drugs Act for selling adulterated rum. Mr. Scott Elder prosecuted, and Mr. Oliver defended. George Wilson spoke to purchasing from defendant's daughter a pint of rum for the purpose of analysis. Witness paid 2s. for it. Mr. Scott Elder said in this case the rum was 32·95 degrees under proof. 25 degrees only was allowed. Mr. Oliver said it was practically eight degrees lower than it should be. The excuse he had to make was that the defendant was not fully able to attend to his work, being more or less an invalid. The son generally mixed the spirit for the purpose of retailing it, but on the present occasion he left this duty to the cellarman, who put a little too much water in. It was really a mistake on the part of the cellarman. The Chairman: Who is the holder of the license. Supt. Burrell: The Chester-le-Street Brewery. Is the defendant the tenant or manager? The tenant. He reduces the spirit himself? Mr. Oliver: Yes. Mr. Scott Elder said there was really 10 per cent. too much water. The Chairman: It makes it rum and water practically. Mr. Scott Elder: It is a big house, and the only one for miles round. The Chairman said if a man went in for a glass of rum he had a right to get rum. He could water it as he chose. The public must really be protected against these frauds, and he might say if another

case of the kind came before him the fine would be a heavy one. This was the first case of the kind they had had, and as the defendant had not been there before he thought the ends of justice would be met with by the imposition of a fine of £5.—John Temperley, Flass Inn, was charged with selling whisky 34·45 degrees under proof. Defendant pleaded guilty. Mr. Scott Elder who again prosecuted, said he purchased a sample of whisky from the defendant for the purpose of analysis. The certificate of the analyst showed that the spirit was 34·45 degrees under proof. Defendant said it was a mistake of the barman, who was a new hand from the colliery. The Chairman said it was perfectly monstrous that if the public went for a glass of spirit they did not get what they asked for. This adulteration was a fraud of the very worst description, and he could not express himself too strongly. It was most abominable that this thing should go on repeatedly. For anything he knew there was scarcely a single public-house in the country which was free from it. He hoped in course of time adulteration would become a thing of the past, although he had very little faith that it would. In the meantime they were there to administer the law, and must do their best to put a stop to it. Publicans were not satisfied with ordinary profits, but wanted additional profits. Defendant would be fined £5.

At Rochester County Police Court, Charles Wallington, landlord of the White Horse Inn, Chatham Hill, was summoned for selling adulterated brandy and rum to the prejudice of Supt. Lacy. He pleaded not guilty, and was defended by Mr. A. B. Hearne. Detective-constable Andrews proved purchasing the spirits, and to handing them over to the superintendent, who had sent him to buy, and afterwards came into the house. By Mr. Hearn: He saw no notice relating to spirits hanging in the bar. He had purchased at the same time gin and whisky, which had been found by the public analyst to be correct as to strength. Supt. Lacy produced the certificate of the county analyst, which showed the brandy to be 2·96 and the rum 1·38 degrees below the legal limit under proof. By Mr. Hearn: He had known the defendant as the landlord of the house for the past six years. He had previously taken samples of spirits sold by him which had been found correct. On the day in question he did not go into the bar; but three years ago the defendant had drawn his attention to a notice he had hanging there as to spirits sold in the house. Mr. Hearn, for the defence, submitted that these were automatic prosecutions on the analyst's certificates, which could only be rebutted by other analysts being called in. His client was at all times very careful in "breaking down" his spirits, and for the purpose used a hydrometer. On this occasion, however, they had been broken down some time, and so had lost strength by evaporation. The defendant had a notice placed in a prominent position in the bar declaring that the quality of the spirits were not guaranteed, and if that did not protect a publican he did not know where they would be. The Clerk: A blind man could not see the notice. Mr. Hearn: Blind men ought not to buy spirits. (Laughter). Mr. Hearn proceeded to cite cases upon the point of the sufficiency of the notice as a protection to his client in such a case, and a long legal argument followed between him and the Justices' Clerk (Mr. E. L. Baker). Defendant said that he had kept the White Horse Inn for eight years, and this was the first complaint against him. The notice produced had always been shown in his bar at the back of the counter, and visible to everybody who entered the house. William Brown, school attendance officer for Gillingham, present in court on other business, gave independent evidence as to this notice being shown prominently in the bar. William Williamson, of Longfellow Road, and Joseph Mason, of 198, Mill Road, New Brompton, gave evidence of a like nature. The magistrates retired to consult, and on their return decided to convict, and to fine the defendant 10s. in each case, and the costs; the penalty amounting in all to 34s.

Upon Mr. Hearn asking that the bench would state the grounds upon which they had decided to convict, Colonel Budden said they were of opinion that the sale was to the prejudice of the purchaser, and that Police-constable Andrews had not seen the notice as to the spirits not being guaranteed. He thought it was a great pity that the licensed victuallers did not allow the merchants to "break down" the spirits for them. Mr. Hearn said that there was no doubt that that would be a very much better way, as they could then obtain a warranty from the merchants which would protect them from prosecutions of this kind.

What Whisky is Composed of.

A MEETING of the Foods and Drugs Sub-Committee of the Public Health Committee of Aberdeen County Council was held on November 24th, Lieutenant-Colonel Innes of Learney presiding. The report of Professor Hendrick, the county analyst, was submitted, giving the results of the number of samples of articles offered by traders to the public which, during the past six months, had been seized in Aberdeenshire under the Food and Drugs Act. There had been, it was stated, about 100 of such samples analysed, a considerable number of which consisted of whisky. The analyst gave it as his opinion that in many instances new raw grain whisky had been diluted as well as coloured and flavoured by brown sugar. The report was ordered to be printed and circulated among the members.

A CURIOUS WEIGHING MACHINE.

At Leeds, on November 21st, before the Stipendiary Magistrate (Mr. C. M. Atkinson), Samuel Mathers, woollen rag dealer, Water Lane, Leeds, and William McGann, one of his employes, were summoned under the Weights and Measures Act, at the instance of Mr. A. H. Rutherford, chief inspector, on a charge of having wilfully committed a fraud in the use of a weighing machine. Mr. C. C. Joliffe (Deputy Town Clerk) prosecuted, and Mr. E. H. Middlebrook defended. The case was taken under section 26 of the Act, and was the first prosecution of its kind heard in Leeds. It appeared that for some time past Mr. Atkinson, wholesale clothier, of Park Place, had been in the habit of disposing of his tailor's clippings and sweepings to the defendant, who weighed them at his own place of business, in the presence of Mr. Atkinson's man, and there paid him for them. In order to test the accuracy of defendant's machine, Mr. Rutherford had the goods weighed on the 21th October before they were sent away from Atkinson's premises, and it was subsequently discovered that defendant gave credit for 87½ lbs. less than he should have done. The inspector also found that the machine was unjust by reason of the presence of certain pieces of lead, which Atkinson's man had not noticed at the time the goods were weighed. It was explained in defence that the goods had deteriorated in value owing to the presence of cotton warp, and that the defendant, instead of complaining to Mr. Atkinson, as he should have done, had understated the weight in order to obtain value for his money. The Stipendiary Magistrate imposed a penalty of £5 against Mathers; the charge against McGann was withdrawn. On the application of Mr. Rutherford defendant was ordered to dispose of the machine for old iron.

SALICYLIC ACID IN JAM.

At the Llanrwst Petty Sessions on November 27th, before Dr. Jones, Mr. Isgood Jones, and Mr. H. J. Watling, a case of wide interest was heard, in which Messrs. E. P. Jones, Son, and Co., provision merchants, were summoned by Supt. Jarvis for unlawfully selling a two-pound pot of jam alleged to contain a certain ingredient not recognised by the Act of Parliament. Mr. David Jones prosecuted, and Mr. Rose Jones, London (instructed by Mr. J. E.

Humphreys, Llanrwst), defended. Supt. Jarvis said he purchased a two-pound jar of raspberry jam at the defendant's Llanrwst shop on the 17th of October. He divided the contents into three portions, gave one to the manager, kept one himself, and sent the other to Mr. Lowe, the county analyst. Mr. William Foulkes Lowe said he had made a personal analysis of the jam sent to him by the superintendent, and found it to contain 0·024 per cent. of salicylic acid, equal to 1·7 grain per pound. It was an unnecessary adulteration, was a poison, and if used in food was injurious to health. If taken continually it acted on the digestive organs and created chronic dyspepsia. Cross-examined: Witness said he had no medical degree. For the defence Mr. Rose Jones said the evidence given really amounted to nothing. They granted that the certificate was correct, but they absolutely disagreed with the statement that 1·7 of a grain of salicylic acid in a pound of jam could cause injury to the consumer even if continually taken. Counsel called expert evidence to prove that the amount of salicylic acid contained in the jam was not injurious to health, the witnesses including Dr. Thomas Bond, consulting surgeon to the Westminster Hospital, and a Treasury specialist: Dr. Snape, holder of the Chair of Chemistry in the Aberyswith University; Dr. Thomas (Rhyl), and Dr. E. H. Jones (Rhyl). The first-named witness said he administered 10 grains of the acid three times a day to some of his patients. It was not injurious to health, but was a useful preservative. The chairman (Dr. Jones) said the case was dismissed by a majority of the bench.

PROCEEDINGS OF THE DEPARTMENTAL COMMITTEE ON FOOD PRESERVATIVES.

(Continued from page 571.)

THE Committee resumed its sittings on November 21st.

Mr. T. Clements, one of the managing directors of Messrs. Andrew Clement and Sons (Limited), cheese and produce merchants, Glasgow, said he attended as a representative of the Scottish Wholesale Provision Merchants' Association. The association was of opinion that the use of preservatives in certain proportions was absolutely necessary in the butter trade. This was specially the case with colonial butter. They had strongly urged the Canadian producers to use boracic acid. His firm handled a considerable quantity of Irish butter, the quality of which had improved very considerably of recent years. If Irish butter contained less moisture it would be the best butter in the market—superior to Danish. The quality of Danish butter had deteriorated considerably in recent years. It has largely lost its keeping quality because the producers had mostly given up preservatives and had gone in for "Pasteurizing" as a preventive to the butter going "strong." This "Pasteurizing" altered the character of the butter altogether, though it conduced to its "keeping" a little longer. It did not, however, make it a keeping butter.

The Chairman asked whether, now that they had substituted a mild preservative for the old method of salting, it would be unreasonable to ask that the old distinction between preserved butter and fresh butter should be maintained?—The witness said that if it could be carried out without too much harassing of the retailer he did not see any objection to it. It would be one more hindrance to the trade, and he did not think it was necessary. People wanted to get the best article they could afford to buy, and they did not care what it contained, provided it was palatable and they believed it to be wholesome.

Continuing, the witness said that the percentage of boracic acid necessary was 1 per cent. of preservative, which meant $\frac{1}{2}$ per cent. of acid. Any excess over the would show in the flavour and deteriorate the quality of the butter. There was less danger in the use of butter slightly treated with boracic acid than of heavily salted

butter in which decomposition had started. Butter from the colonies was sometimes four months at sea if the vessel should happen to be delayed, and in seasons when there was not a large demand the stocks in the hands of the dealers sometimes had to be kept for long periods.

Mr. W. Davidson, head of the firm of John Laird and Co., wholesale importers and provision merchants, of Glasgow, corroborated the evidence of the last witness in regard to the preservative used in butter, but he principally wished to represent the views of the Scottish Wholesale Provision Merchants' Association in regard to the preservation of meats. In the whole of Scotland there was no such thing as the use of preservatives in the curing of meats, except salt and saltpetre. His firm handled large quantities of meats from Canada and the United States which were partially preserved by borax. If the trade as at present carried on were interfered with it would be a serious matter to thousands of poor workers, especially in mills and factories and in the iron districts. The people would not be willing to revert to the salted meats which were in use 20 to 25 years ago.

Dr. Voelker, consulting chemist to the Royal Agricultural Society of England, said that he had analysed various samples which had been sent to him by members of the Agricultural Association, and had found preservatives used in them. He had found boracic acid in cream, milk, and butter, and formerly had found salicylic acid, but not for a long time. He had found boracic acid in Australian condensed milk to the extent of 51 per cent. This would give 11·3 grains in the pint of milk, a very high percentage, and one not at all safe to the consumer. He should recommend that colouring matter should not be forbidden in butter, and he was not particular about the use of preservatives in butter, but he would suggest that boracic acid should not be used in cream, and that where used in milk the fat should be declared.

Professor McFadyean, president of the Royal Veterinary College, objected entirely to the use of any sort of preservative in milk as being undesirable and in most cases physiologically indefensible. When used in milk in sufficient quantity to stop bacterial action preservatives might be injurious to health of a child.

On November 22nd, Dr. Edward Walford, past president of the West of England and South Wales branch of the Society of Medical Officers, and medical officer of health to the urban port sanitary authority of Cardiff, said the local analyst had reported to him cases of the use of boracic acid for the preservation of milk and a few cases of the use of formalin. In his opinion it was undesirable that these substances should be added to food, as it was possible that they might produce injury to health. From 8 to 13 per cent. of the samples of milk analysed in Cardiff were found to be treated with preservatives, the percentage of the boracic acid used varying from 0·05 per cent., or 7 grains per quart, to 0·09, or 14 grains per quart. These proportions would, no doubt, do harm to a weak person—a young child, for instance, who was being entirely fed on milk. Milk containing preservative should be sold as such. He thought, however, that the use of preservatives in milk was unnecessary, and, under any circumstances, dangerous to health. He had found boracic acid largely used as a preservative in the case of butter. There has been one prosecution in a case in which the acid was present to the extent of 1 per cent., which would give 71·4 grains per lb. The case was dismissed, as the defendant produced a warranty from the wholesale dealer that the butter was sound. It was found impossible to get hold of the wholesale dealer. The experiments which had been made hitherto had not been sufficiently searching to enable him to say that the use of boracic acid in milk was physiologically indefensible. There was, however, some indication that digestion was impaired by boracic acid, and it was probable that infantile diarrhoea might be kept up by the consumption of milk treated with boracic acid. He did not think that the prevention of the

use of boracic acid in milk would decrease the amount of that commodity supplied to populous districts.

Mr. R. A. Cripps, of Hayward's Heath F.C.S., stated that he had made experiments to gauge the influence of boracic acid on digestive ferments, and found that in the case of starch and albumen it had no detrimental influence. He, however, thought that boracic acid should not be used as a preservative in milk, otherwise children fed entirely on milk might be taking medicinal doses. In butter the presence of boracic acid would not be injurious.

Mr. Vesey, F.I.C., gave evidence as representing the *Lancet* newspaper. He said he had been making enquiries into the subject of food preservatives for the past ten years, and had found preservatives used in the case of meat peptones intended for invalid use, beef jelly intended for invalids, milk, lager beer, lime juice, grape juice, apple juice, cider, lemon squash, and sausages, the preservatives used being benzoic acid, formaldehyde, salicylic acid, boracic acid and borax. He had reported on finding these preservatives, and the vendors of the goods had written to say that they would manufacture without the preservatives. He had analysed the milk supplied to eleven London hospitals, and had found that seven of the samples was good rich milk, three contained boracic acid, and one formaldehyde, and he recommended that in the future each hospital should receive a warranty with its milk. He would not put a stop altogether to the use of antiseptics, save in the case of benzoic acid and formaldehyde, but there should be legislation declaring the *maximum* amount of the preservatives which might be used, and which should not be exceeded. The foods which might be treated with the preservatives should be scheduled, and the largest amount of the preservative which might be used in each case should be clearly set forth. Legislation should be directed to the abuse rather than the use of antiseptics. He had found copper used in connection with the colouring of green peas. In one case the quantity amounted to six grains of crystallized copper sulphate per pound of peas. If this artificial means of preserving the colour of vegetables was to be recognised at all, some very precise limit should be placed upon the amount of copper salt so employed.

On November 23rd, Dr. W. Williams, the medical officer of the Glamorgan County Council, gave evidence on behalf the Incorporated Society of the Medical Officers of Health. He said the present state of our knowledge of the physiological action of boracic acid and borax was so imperfect that it was difficult to say what amount of these substances could be added with safety to the consumer. Borax and boric acid should not be sanctioned as preservatives in milk and butter unless stringent rules were passed as to the quantities to be used; and in the present state of knowledge its use should be prohibited altogether. There was no doubt that the practice of drugging the public promiscuously and without their knowledge by incompetent people was very dangerous. He found that the amount of boric acid added to milk varied from $13\frac{1}{2}$ grains to 210 grains per gallon. In butter the amount of boric acid was from one grain per pound to 112 grains per pound. The butter from which these samples were taken was principally imported butter. The Glamorgan County Council notified to milk vendors that boric acid and other preservatives would be entirely prohibited throughout the county; and with regard to butter it was recommended that in all cases the admixture of boric acid with butter should not exceed 35 grains per pound, which was double what was considered sufficient as a preservative. He considered that 17 grains per pound was quite enough as a preservative for butter, and therefore the council were liberal in allowing the 35 grains. The county council had prosecuted milk vendors and obtained five convictions; and in 13 cases against butter vendors there had been six convictions. These convictions had diminished the use of preservatives, but had not prevented their use altogether. He had not detected the presence of boric acid in milk by

taste or smell. He could not prove that any direct injury to health had resulted from the use of preservatives; but in the case of children and invalids where a large quantity of milk was used he should think that the preservatives were injurious to health. His view was that preservatives were not really required in milk and butter. He admitted that if they insisted upon the absolute prohibition of preservatives it might do away with the small vendors who had not the appliances for sterilizing the milk or could not afford to boil it.

Dr. Handford, medical officer of health to the Notts County Council, said he had of late years been considering the effects of the internal use of boric acid, and in a large number of cases where he had used it as an internal remedy for bladder diseases he had had to suspend its use on account of the irritating effect it produced upon the stomach and the loss of appetite that resulted. Some persons could take the usual dose of 30 grains of boric acid for weeks with apparent immunity, and others got pains and discomfort within a few days. In some cases the beneficial effect of the drug on the disease of the bladder was so great that, notwithstanding the unpleasant effects produced on the stomach and the intestines, the patient would recur to the use of it time after time. At the General Hospital in Nottingham he found an infant, seven months old, suffering from diarrhoea, and the milk contained seven grains of boric acid per quart, which would be a large dose for an infant, and in a short time would produce prejudicial effects. The hospital committee had prohibited the use of milk with preservative, and they found no difficulty in getting it pure. It was only during the last few years that medical officers of health had directed their attention to the subject of food preservatives, and the medical schools of ten or fifteen years ago had not touched the question. Cream was very often being substituted for cod liver oil, and the presence of boric acid in the cream would be very injurious to the patient. In the case of infants the milk and cream was very much reduced, a great deal of the fatty matter being taken out of it, and if boric acid were added it would be very deleterious. Then, again, the boric acid enabled stale milk to be sold as fresh milk; and when the boric acid was applied to fish it would disguise the decomposition rather than prevent it. In fact, boric acid was being used in such a large variety of foods that its effect must be injurious. He thought the country was capable of consuming twice the quantity of milk now consumed, and if attention were paid to the cleanliness of cowsheds and the preparation of milk there would be no necessity for the use of preservatives at all.

The Committee resumed its sitting on November 24th. Dr. Alfred Hill, the Medical Officer for Birmingham, being called, he said he had submitted the staple articles of food sold in the city to analysis. Milk was the principle article examined. In the last three and a quarter years, ending September this year, he had examined 1,537 samples of milk, and of those, 135, or 9 per cent., contained either boracic acid or formaldehyde. He should say that the use of preservatives was becoming more general, especially that of formaldehyde. With regard to margarine and butter, he had submitted 871 samples to analysis within the last three and a half years, and the result showed that 243 of the samples, or 28 per cent., contained boracic acid.

Continuing, the witness said he had lumped together the samples of margarine and butter, because the samples of margarine sold as such were so few that it was hardly worth separating them. In his experience margarine was generally sold as butter. He had also examined samples of ham and bacon, sausages, etc., in which he had found boracic acid in varying quantities from 10 to 45 grains per lb. He believed as a general rule the boracic acid was rubbed on the surface of the bacon. He knew that the preservative existed in larger quantities on the exterior than in the interior parts of ham.

Answering Professor Thorpe, witness said that the per centage of foods containing preservatives in the total number analysed during the last three and a half years was 20 per cent. He had never been able to understand why such a large per centage as 84 of the margarine examined should contain a preservative. He certainly saw no necessity for it. He should think it was less liable to decomposition than butter, and certainly it was not disposed to turn rancid so rapidly as butter fat. He would advocate the legislature prohibiting the use of preservatives in articles of food.

Dr. J. S. Cameron, the medical officer of health for Leeds, said he was hardly inclined to legalise the use of preservatives and salicylic acid, but he would abolish them altogether. He would be prepared to allow the use of preservatives if the quantity and nature of the preservative were declared at the time of purchase. With regard to copper in peas and other vegetables he would prohibit its use.

Dr. Mann, Professor of Forensic Medicine and Toxicology at Owens College, Manchester, said he believed the addition of boracic acid was prejudicial to the young infants who had to live upon milk. In his opinion boracic acid ought not to be allowed to be added to milk at all. He would prohibit copper in peas, although he did not think it had been proved that they were dangerous to health.

The Committee then adjourned until December 19th.

THE FOOD AND DRUGS ACT IN DURHAM.

MR. B. SCOTT ELDER, Chief Inspector, reports :—

Your inspectors have submitted 180 samples of food and drugs to the county analyst, and several important prosecutions have resulted, the fines inflicted amounting to £50 5s. Seven cases are reserved for your consideration.

A sample of whisky which was certified to be 33·95 degrees under proof was purchased by the inspector in a bottle bearing a label stating that the contents were 35 degrees under proof. There was therefore no prejudice.

I am pleased to report that out of 27 samples of butter submitted during the quarter not a single instance of adulteration was discovered. A fine of £20 and costs was inflicted in the "butter" case which stood adjourned at the date of my last report.

Referring to the conviction for adulterated camphorated oil mentioned in my last report, notices of appeal were served by the defendants, but the appeal was afterwards withdrawn.

A rather peculiar position has arisen out of the recent prosecutions for adulterated camphorated oil. Although several merchants have immediately rectified what was wrong, by calling in the adulterated article and supplying the genuine in its place, other merchants have had recourse to what I consider an evasion of the law by altering the labels to suit the contents of the bottle, as in the following instances :—

- (i) "Oil with camphor."
- (ii) "Camphor embrocation to be used as
"Camphorated oil."
- (iii) "Camphorated ("Mineral") oil."

I have recently had many opportunities of purchasing these compounds from innocent traders, but have refrained for the present from prosecuting because (generally speaking) of their ignorance. In my opinion such compounds, although labelled as above, cannot legally be sold to a purchaser who asks for camphorated

oil, and I hope that traders will note this. The extent to which the public can be imposed upon in this article, which when genuine contains only camphor and olive oil, may be seen by reference to a case heard during the past quarter, where the sample was deficient in camphor no less than 92 per cent. and was compounded with mineral oil (costing about 1s. 6d. per gallon) instead of olive oil (costing about 6s. 6d. per gallon). It transpired that the firm which supplied the compound had become defunct, or I have little doubt a very heavy penalty would have been imposed. As it was a fine of 20s. and costs was inflicted.

Considerable improvement is already shown in the composition of Seidlitz powders, and it has only been necessary to institute proceedings in one instance, where after a lengthy hearing the Justices referred a portion of the sample to Somerset House, and the case stands adjourned. Some of the Wholesale Dealers are now adopting the practice of labelling their powders "Hand-weighed."

During the quarter one trader has submitted through this Department a sample for private analysis by the Public Analyst, in accordance with section 12 of the 1875 Act, and another sample for a like purpose has reached this office to-day. I believe that when this provision of the Act is better known, many traders will avail themselves of it, especially where large purchases are made.

I have to report that the Food and Drugs Act, 1899, comes into operation on 1st January, 1900. It will probably interest you to know that almost every amendment suggested by this committee has been incorporated in the Act. A much larger authority is now vested in the Board of Agriculture and the Local Government Board, and it may be hoped that by the vigorous application of it an effective and efficient administration throughout the whole country will be secured. The Act contains many valuable provisions, though stated in terms which are perhaps not quite as clear as might be, to which I need not now particularly refer, but in addition to the provisions inserted at the instance of this committee it appears desirable to mention the following which directly affect traders, and for compliance with which they will be held responsible :—

Every person who, himself or by his servant, in any highway or place of public resort sells milk or cream from a vehicle or from a can or other receptacle shall have conspicuously inscribed on the vehicle or receptacle his name and address.

The letters required to be printed on the paper wrapper in which margarine or margarine-cheese is sold shall be capital block letters not less than half an inch long and legible, and no other printed matter shall appear on the wrapper.

Margarine-cheese, which means any substance, whether compound or otherwise, which is prepared in imitation of cheese, and which contains fat not derived from milk, must be labelled as such, and otherwise dealt with as margarine itself.

THE FOOD AND DRUGS ACT.

Circulars by the Board of Agriculture.

WE have received from the Board of Agriculture copies of a number of circulars calling the attention of various persons interested to the provisions of the Sale of Food and Drugs Act, 1899, which comes into operation on January 1st next. We append the full text :—

NOTICE TO MANUFACTURERS OF MARGARINE IN GREAT
BRITAIN.

The Board of Agriculture desire to draw the attention of manufacturers of margarine and wholesale dealers in

margarine to the provisions of sections 5, 6, 7 and 8 of the Sale of Food and Drugs Act, 1899, which extends and amends the provisions of the Margarine Act, 1887 (50 and 51 Vict. ch. 29), and which will come into operation on January 1st, 1900.

By section 5 of the new Act, the provisions of the Margarine Act, 1887, are extended to "margarine-cheese," which expression is defined (by section 25 of the Act) as meaning "any substance, whether compound or otherwise, which is prepared in imitation of cheese, and which contains fat not derived from milk."

The effect of section 5 is that no such substance can be lawfully dealt in, exposed for sale, or sold except under the name of "margarine-cheese," and under the conditions set forth in section 6 of the Margarine Act, 1887, with respect to margarine, *mutatis mutandis*; and the section further requires that all margarine-cheese sold or dealt in otherwise than by retail, shall either be inclosed in packages marked in accordance with the Margarine Act, 1887 (as amended by section 6 of the new Act), or shall be itself conspicuously branded with the words "margarine-cheese."

Section 6 provides that the brand or mark, required under the new Act or the Margarine Act, 1887, to be placed on any package containing margarine or margarine-cheese, shall be on the package itself and not solely on a label, ticket, or other thing attached thereto.

By section 7 (1) every occupier of a manufactory of margarine or margarine-cheese, and every wholesale dealer in such substances, is required to keep a register showing the quantity and destination of each consignment of such substances sent out from his manufactory or place of business, and this register is to be open to the inspection of any officer of the Board.

By section 7 (2) any officer of the Board is empowered to enter at all reasonable hours any manufactory of margarine or margarine-cheese, and to inspect any process of manufacture therein, and to take samples for analysis.

The provisions of section 9 of the Margarine Act, 1887, relating to the registration of manufactories, are extended to any premises wherein the business of a wholesale dealer in margarine or margarine-cheese is carried on, and the registration must be forthwith notified by the local authority to the Board [section 7 (4) and (5)].

It is important to note that section 8 of the Act makes it an offence under the Margarine Act, 1887, to manufacture, sell, expose for sale, or import any margarine, the fat of which contains more than ten per cent. of butter-fat. But this section does not apply to any margarine manufactured or imported in fulfilment of any contract made before July 20th, 1899.

In this connection it may be pointed out that the effect of section 17 (2) of the new Act is that in respect of third or subsequent offences under the Margarine Act, 1887, or the new Act (both Acts being by section 28 included under the expression "the Sale of Food and Drugs Act") the offender will, if the offence in the opinion of the court was committed by his personal act, default, or culpable negligence, be liable (if the court is of opinion that a fine will not meet the circumstances of the case) to imprisonment, with or without hard labour, for a period not exceeding three months.

Reference may also be made to the provisions of section 20 of the new Act as to the use of a warranty or invoice by way of defence under section 7 of the Margarine Act, 1887, or section 8 of the new Act.

CIRCULARS TO CLERKS TO LOCAL AUTHORITIES IN GREAT BRITAIN.

Sir,—I am directed by the Board of Agriculture to draw your attention to the provisions of sections 2 and 3 of the Sale of Food and Drugs Act, 1899 (62 and 63 Vict. ch. 51), which will come into operation on January 1st, 1900.

This Act should be read in connection with the existing statutes which it amends and supplements, viz., the Sale of Food and Drugs Act, 1875 (38 and 39 Vict. ch. 63), the Sale of Food and Drugs Act Amendment Act, 1879 (42 & 43 Vict. ch. 30), and the Margarine Act, 1887 (50 and 51 Vict. ch. 29). These three statutes, together with the New Act itself, are in the new Act and in this circular referred to as the Sale of Food and Drugs Acts.

Under section 2 (1) of the new Act the Board of Agriculture may, in relation to any matter appearing to the Board to affect the general interests of agriculture in the United Kingdom, direct an officer of the Board to procure for analysis samples of any article of food, and thereupon the powers and provisions of the Sale of Food and Drugs Acts with respect to the procuring of samples will be applicable, subject to certain modifications. The Act provides (section 26) that, for the purposes of the Sale of Food and Drugs Acts, the expression "food" shall include every article used for food or drink by man, other than drugs or water, and any article which ordinarily enters into or is used in the composition or preparation of human food; and shall also include flavouring matters and condiments.

One part of any sample procured by an officer of the Board is, in accordance with section 14 of the Sale of Food and Drugs Act, 1875, as amended by section 13 of the new Act, to be submitted by him for analysis to the public analyst [section 2 (1) (a)]; but the fee for the analysis is payable to the analyst by the local authority of the place where the sample is procured [section 2 (1) (b)]. The Act [section 2 (2)] provides that the Board are to communicate the result of the analysis of any such sample to the local authority, and that thereupon there shall be the like duty and power on the part of the local authority to cause proceedings to be taken as if the local authority had caused the analysis to be made.

It is important to observe that the Act [section 3 (1)] makes it the duty of every local authority entrusted with the execution of the laws relating to the sale of food and drugs to appoint a public analyst, and to put in force from time to time, as occasion may arise, the powers with which they are invested, so as to provide proper securities for the sale of food and drugs in a pure and genuine condition, and in particular to direct their officers to take samples for analysis. This provision is followed by an enactment [section 3 (2)] under which, if the Board, after communication with a local authority, are of opinion that the local authority have failed to execute or enforce any of the provisions of the Sale of Food and Drugs Acts in relation to any article of food, and that their failure affects the general interests of agriculture in the United Kingdom, the Board may, by order, empower one of their officers to execute and enforce those provisions, or to procure the execution and enforcement thereof, in relation to any article of food mentioned in the order.

The expenses incurred by the Board or their officer under any such order are to be treated as expenses incurred by the local authority in the execution of the said Acts, and are to be paid by the local authority to the Board on demand, or in default the Board may recover the amount of the expenses with costs from the local authority [section 3 (3)].

The Board would be glad if you would take steps to bring under the notice of your local authority the foregoing summary of sections 2 and 3 of the new Act, and they will be glad to furnish copies of this circular for distribution amongst the members of your local authority and the officers concerned, upon being informed of the number you require. The Board will, in a subsequent letter, explain their views as to the lines upon which they would propose to exercise the very important powers and duties conferred and imposed upon them by the sections in question.—I am, sir, &c.

(To be continued next week.)

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Food and Sanitation.

SATURDAY, DECEMBER 9, 1899.

THE PRESENT STATUS OF BUTTER.

In a charmingly written book recently published, entitled "A Farmer's Year," Mr. H. Rider Haggard complains bitterly of the colouring of margarine and treats his readers to some "horrible revelations" of the filthy processes employed in the manufacture of foreign butters, with a description of a margarine manufactory worthy of

the practised pen of the creator of "She" and the mighty "Umslopogass." But unconscious Mr. Haggard himself supplies the real reason why English butter has taken a back seat in the market. He frankly discloses the state of the water supply on East Anglian farms.

Mr. Rider Haggard says: "I noticed that the shallow edge of the water was simply full of frogs (some of them dead) and spawn. This pond supplies drinking water for the farm."

"So far as my observation goes the system of water supply in villages appears to be abominable." Mr. Haggard mentions one outbreak of diphtheria in the parishes from this cause, yet with a curious blindness he says on page 191 of "Brittany Butter and Their Consumers," "What matters it to them that an ancient and festering mudden heap stands before the door of the dairy or that the water with which the vessels are washed is practically a concentrated sewage fluid, or that the butter is treated with boracic acid."

He forgets entirely his previous frank condemnation of the filthy ponds used for the drinking supply of milch cows, etc., and wonders why the consuming public prefers to use margarine in rapidly increasing quantities. He need hardly give way to surprise, the earners of small wages in towns soon learns the need for economy. A healthy margarine, cleaner, better flavoured, and more wholesome than the majority of home made or imported butter, containing less water and free from drugs can be bought at half the price of the semi-rancid, drugged, filthy produced native butter, and the consumer would be a fool if he or she paid double the price for the inferior butter. Margarine properly made is all round a superior article to butter, and butter has got to give way to it. It is only since margarine came into active competition with butter that hygiene in the dairy has made any real progress in the United Kingdom. Twenty years ago the bulk of the butters sold were filthy and produced under disgusting conditions.

"Pure" butter has come too late to compete successfully with pure margarine. Mr. Haggard has our sympathy as the old stage coach has.

MILK PROSECUTIONS.

Unsound Condensed Milk.

At Thames Police Court, on November 30th, James Dean, of 192, Brick Lane, Bethnal Green, was summoned before Mr. Dickinson, for having in his possession 71 tins of condensed milk, which were bad, and intended for the food of man. Mr. Young, who prosecuted on behalf of the Poplar District Board of Works, said the defendant was a pastrycook and confectioner carrying on business at 92, Chrisp Street, Poplar, and Brick Lane, Bethnal Green. On November 1st, Mr. G. Miners, sanitary inspector, paid a visit to 92, Chrisp Street, and saw the defendant's daughter and the foreman. In a store-room the inspector found a case containing 71 tins of condensed milk, all of which, on examination, were found to be bad. The defendant did not live on the premises, and Miss Dean said she represented him. Both the lady and the foreman, while denying that the condensed milk was used in the manufacture of pastry, admitted that it was used for the purpose of making caramel toffee. At the same time another visit was paid to the defendant's place in Brick

Lane, where 48 tins of bad condensed milk were found. There was also a tin, half filled, which had evidently been recently used. The milk was seen by Dr. Alexander, and afterwards condemned by the magistrate. The first mentioned case was identified by the marks on it as having come from Messrs. Lehman, and that firm had given them to a man named Worsfold, who was under a contract to remove and destroy them. The defendant gave a description of the man from whom he purchased the tins, and it tallied with the man Daley, who was recently convicted at that court for selling bad food. Dr. Alexander, in cross-examination by Mr. F. Deakin, who defended, admitted that he did not know the contents of all the tins. On behalf of the defendant, Mr. Deakin submitted that there was no case to answer. First of all, except one tin which the doctor tasted, there was not a shred of evidence to show what the remainder of the tins contained. There was a question as to whether toffee was food for man, although he admitted that it was eaten by man. The defendant had no personal knowledge as to that particular consignment, as he was away at Brighton at the time. They were purchased by Miss Dean. Mr. Dickinson fined the defendant £20 and £10 10s. costs.

Swindling the Paupers.

At Belfast, on December 1st, Mr. Hodder, R.M., tried several charges against contractors of Workhouse milk. William Chapman, Joy Hill, Dunmurry, Co. Antrim, was the first defendant proceeded against. Adam Weir, master of the workhouse, swore that on the 7th November he took a sample of the milk supplied and divided it into three parts, giving one to the defendant. One of the other parts he submitted to Professor Hodges, analyst to the union, and the certificate he received from him showed that it contained a good deal more than the percentage of water allowed. Mr. Hodder: It is the worst class of offence that could possibly be committed. It is not only a fraudulent offence, but it is one that deprives the poor, the unprotected, and the wretched inhabitants of the workhouse of the food they are legitimately entitled to. It is impossible to conceive a man so destitute of any sense of right as to take advantage of his position of contractor to the workhouse to defraud the poorest class of the community. The magistrates impose the fullest penalty, £20 and costs.—The case of Thomas Hugh Barratt was then gone into. Mr. Harper read the certificate received from Professor Hodges, stating that in the present defendant's milk there was an added quantity of water to the extent of 19.9. Mr. Hodder: This is as bad a case as the last, and having regard to the cautions that the magistrates think necessary to impart, they inflict the same penalty, £20 and costs.—In the next case the defendant was John J. Reid, Creigogerogan, County Antrim. Mr. Lewis: the only question I notice in this case is that the person has been for a long period contractor; the adulteration is only 17 per cent. Mr. Hodder: There is a clear indication to defraud on the certificate, and we impose a penalty of £20.—In the case of Robert Barron, Ballypallidy, Professor Hodges' certificate stated that in the sample submitted to him there were 84 parts of milk and 16 parts of added water. The defendant did not appear, and was not professionally represented. A similar penalty was imposed.—Samuel Baron, Templepatrick, who was prosecuted on a similar charge, was also unrepresented. The percentage of added water in this case was 12.48, the milk being 87.52. The contract was for a supply of 90 gallons of sweetmilk daily. Their Worships imposed a like fine and costs.—The next case was that of Samuel M'Bride, Turf Road, Ballymurphy. The percentage of added water was 11.20. Mr. F. Kerr appeared for the defendant, who, he said, had been thirty years in the trade. Samples of his milk had been taken several times during that period, and had always been found correct. Their Worships would agree with him that there was a big difference between 11.30 per cent. of water and 40. The magistrates considered that the addition of 11.20 per cent. of water to pure milk showed a clear intention to defraud, and

imposed a fine of £20 and costs, Mr. Hodder remarking that many people had been imprisoned for a lengthy period for a similar offence.

Conviction for Boracic Acid in Milk.

At Port Talbot, Wm. Jones, farmer and milk vendor, of Nantybar Farm, Cymmer, was charged with milk adulteration. Mr. Ed. Powell, Neath, defended, and pleaded guilty. Mr. Ed. Evans, Port Talbot, prosecuted. Inspector McDonald deposed that he bought a pint of milk from defendant's daughter on October 20th, at Abergwynfi. He sent part to the public analyst at Swansea, on October 21st, and on November 15th he received the result of the analysis, which proved that there were 49 grains per gallon of boracic acid in the milk. Mr. Ed. Powell said that defendant lived on poor pasture land, and was forced to give his cows turnips, and people complained that the milk tasted "turnippy." An advertisement appeared in a paper about a certain compound which was colourless and tasteless, but would give a good "tone" to the milk. He purchased some, with the result that he appeared there that day charged with adulteration. The Bench thought the case a rather serious one as mostly invalids and young children suffered from the adulteration, and inflicted a fine of £3, inclusive.

MARGARINE PROSECUTIONS.

At Watford Petty Sessions, Henry Barton, of Church Street, Rickmansworth, was summoned under the Food and Drugs Act, for selling butter adulterated with 67 per cent. of fat. Defendant pleaded not guilty. Walter Trenchard, assistant to Mr. W. G. Rushworth (inspector of weights and measures) said that on Monday, November 6th, he went into the defendant's shop, at Rickmansworth, and asked for half-a-pound of shilling butter. Mr. Barton gave it to witness, and Mr. Rushworth then came in and took the butter from him. The butter was divided into three portions, and sealed down. William Graswell Rushworth said that on November 6th, at about 3.45, he deputed the previous witness to go to defendant's shop to purchase the $\frac{1}{2}$ -lb. of butter. The witness had the butter handed over to him at the door whilst Mr. Barton was in shop. He told defendant that he had purchased the butter for the purpose of analysis, and offered to divide it in the usual way. The offer was accepted, and the butter divided into three portions. One of these Mr. Barton had, one witness sent to Mr. Ekins, the public analyst, of St. Albans, and kept one himself. Witness produced Mr. Ekins' certificate, showing that the butter was adulterated with 67 per cent. of margarine. Witness afterwards saw the defendant, and told him the result of the analysis. He said that he bought it for butter, and then witness asked him where he got it from, but he could not say, though he might be able to trace it. Witness had not heard anything since. The defendant said that he sold the butter in good faith. He had tried to trace from whom he had obtained the butter. A fine of £5 including costs was imposed.

At the Leeds Police Court, on November 28th, Peter Elliott Allsop, provision dealer, of 212, Hunslet Road, was summoned at the instance of Mr. W. B. Walker, Inspector of Food and Drugs, on a charge of having sold butter which was certified to contain 81 per cent. of foreign fat, and having sold margarine without a proper label. Mr. C. C. Jolliffe, deputy Town Clerk, prosecuted, and the defendant was represented by Mr. Arthur Willey. It was stated that the assistant in the shop had explained that he sold margarine in an unlabelled wrapper to oblige customers who did not want their husbands to know they were eating margarine. Defendant, who had been previously fined for exposing margarine for sale without label, was fined £5 and costs, or fourteen days, on each charge.

At North London, on December 1st, the Hackney Vestry summoned several tradesmen of the district for

selling as pure butter articles to which the Public Analyst certified a large addition of margarine. George Evans, of High Road, Clapton, whose sample of shilling butter contained 78 per cent. of foreign fat, was fined £2 and 12s. 6d. costs.—William Alfred Hudson, of Victoria Road, Hackney Wick, whose sample contained 91 per cent. of foreign fat, was fined £5 and 12s. 6d. costs.—John Evans, of Chatsworth Road, whose sample contained 92 per cent. of foreign fat, was fined £5 and 12s. 6d. costs; and Catherine Ann Lewis, of Wick Road, whose sample also contained 92 per cent. of foreign fat, was similarly fined.

At Rochdale, on November 29th, William Holland, of Stockport, late of 104, Yorkshire Street, was summoned at the instance of Thomas Whiteley, inspector of nuisances for the borough, for selling margarine which was in a package not duly branded, and likewise for selling butter which was not of the nature, substance, and quality demanded by the purchaser, on October 27th. He was also summoned for committing similar offences on November 2nd. Mr. Schroeter, from the Town Clerk's office, prosecuted on behalf of the Health Committee; Mr. John Pegge, of Manchester, defended. The first case, taken under the Margarine Act, was proceeded with. Mr. Schroeter said he would submit evidence to show that William Holland was the manager of the shop in question, though the "butter" was purchased from John Holland. The Chairman: Is it a joint tenancy? Mr. Schroeter: We do not know that. Caroline Llewellyn, Great George Street, said that on October 27th, by direction of Mr. Whiteley, she went to the shop 104, Yorkshire Street, and purchased a quantity of butter, which was subsequently handed to Mr. Whiteley. She did not see defendant. In answer to Mr. Pegge, witness said she had been in the habit of going to the shop, but she did not remember having seen defendant there. She did not see a name over the door. Mr. Whiteley deposed that having received the butter which Mrs. Llewellyn had asked for and purchased, he took it back to the shop and explained that it had been bought for analysis. He divided it into three parts, one of which was sent to the analyst, whose certificate he now produced. The butter was wrapped in plain paper; there was no printing or writing on it. He said to the defendant's brother, who was in the shop, "I suppose this is the 'Irish Creamery Co.?' " and defendant's brother replied, "No; I had a letter from Liverpool telling me to take the banner down after the recent case." In reply to Mr. Pegge, witness said he did not see William Holland, the defendant; he saw his younger brother. Witness said William Holland was manager, and the brother said, "No; John Holland." Mr. Pegge: Didn't he also say he was the owner of the shop? Witness: Yes. You have also issued summonses against John Holland for this offence? Yes. And they are returnable on December 6th? Yes. Well, if you get a conviction to-day will you try to get another conviction against him? Mr. Schroeter interposed. Mr. Pegge: What I want to show is that proceedings have been taken out against two men for one offence. Only one of them can be convicted. The Clerk: You may proceed against an employer and an employee. I do not think you would get a conviction against both. Mr. Schroeter: It is not our intention to get a conviction against more than one of them. Mr. Pegge: Are the proceedings instituted against this man as manager or owner? Mr. Whiteley: Either will do. What evidence have you to prove that this defendant is the manager? We have taken him as manager before. You assume him to be manager? Yes. Weren't you told in Manchester that William Holland had not had anything to do with this shop for three months? Yes. Hasn't William Holland had a shop at Stockport? Yes, a branch. Is it his shop? I suppose so. Doesn't he trade under the name of the "Munster Provision Co.?" I don't know. There was no such name over the Rochdale shop and never has been. Witness added that since the middle of September he had not seen William Holland at the shop in

Yorkshire Street. Replying to Mr. Schroeter, witness said three months ago William Holland was manager, and so far as witness was aware there had been no change. The Clerk observed that the analyst's report stated that the sample contained only 17 per cent. of real butter. William Grainge, goods manager at Rochdale Railway Station, said that on November 2nd a quantity of butter was consigned to "William Holland, Yorkshire Street." It was signed for by "J. Holland."

Mr. Pegge submitted that the prosecution had not made out their case. The butter was purchased from John Holland, who said he was manager and owner. William Holland, the defendant, had had nothing to do with the place since September. The Clerk: Has the tenancy been transferred? Mr. Pegge: So far as I understand, William Holland never was tenant of the place. He was merely manager, and left at the beginning of September. Mr. Schroeter: My point is that he was manager. Mr. Pegge: If it resolves itself into that I submit that there is no case at all. The solicitor added that he had rent and rate notes in his possession. These he handed to the clerk, who read them and remarked, "They are clear enough." The Bench dismissed the case. Mr. Pegge asked for costs, but the Bench refused the application.

On December 2nd, at the Oldham Borough Police Court, before Mr. G. B. Taylor and other justices, William Boyd, a grocer and provision dealer, carrying on business at St. Domingo Street, Oldham, was summoned under the Food and Drugs Act, and also under the Margarine Act, for selling butter not of the nature and substance demanded, and for not labelling such in bulk. The summonses were taken out at the instance of the Corporation for whom the Deputy Town Clerk, Mr. Hallsworth, appeared. When the case was called on for hearing, Mr. Hallsworth stated that since the summons had been served the defendant's shop had been closed, and he had decamped. Under these circumstances he asked for the issue of a warrant against the defendant. The Bench agreed to this course, and a warrant was subsequently taken out.

At Wigan, on November 30th, there were four summonses taken out against Edward Martin and Joseph Molloy, both of 53, Scholes, and Mr. Leslie Scott (barrister), who appeared on behalf of the town clerk, asked that the cases against the two men should be taken together, as there was some confusion as to who was the owner. Mr. Lees defended Martin, and objected to this course being taken. Martin was thereupon charged with being a person dealing in margarine, and selling it in a wrapper not duly labelled on November 4th. Mr. Scott stated the facts of the case. He said that on the date in question Mr. Sumner, the Inspector under the Food and Drugs Act, sent an agent into the shop to purchase some butter. The agent went in and asked for some butter, was served with some substance as pure butter, and came out and handed it to the Inspector. Mr. Sumner then went into the shop, and informed the assistant that the substance had been bought for the purpose of analysis. He divided the two packets into three parts, and left one of each with the assistant. The analyst stated that the substance contained 80 per cent. of fats foreign to butter, and not more than 10 per cent. of pure butter. Mr. Sumner gave evidence in support of this statement, and added the substance was wrapped in plain white paper. The name over the shop was "Molloy Martin." About a month ago defendant told him that he and his brother owned the shop. Mr. W. J. Orsman, Public Analyst, stated that the substance was margarine. Mr. Lees, for the defence, stated that defendant's brother was the owner of the shop, and had been for some months. Edward Martin said Joseph Molloy was his brother. The shop, 53, Scholes, was witness's up to last May, and then he failed and made a deed of assignment, Mr. G. J. Healy being trustee. The shop now belonged to Joseph Molloy, and he had been the owner since April or May. Witness had no interest in the shop. With regard to the evidence of Mr. Sumner as to witness saying the shop belonged to him, he saw the inspector the

day after his brother had bought the shop from Mr. Cubby, and he asked witness did the shop in Scholes belong to him. He said no, it was his brother's. That was in May; he had not had a conversation with Mr. Sumner within the last five or six weeks. In reply to Mr. Scott, witness said he was manager for his brother. His real name was Molloy. He had been convicted in that Court for selling margarine contrary to the provisions of the Act. The deed of assignment was produced. Mr. Scott contended that defendant was a person responsible. A long discussion took place on this point, and eventually Mr. Ellis, magistrates' clerk, said he would advise the magistrates that to be a dealer a man must have some interest other than that of a mere manager. He did not think that the evidence was sufficient to establish a case against defendant as a dealer in margarine. The case was thereupon dismissed, and the three other summonses against Martin were withdrawn. Mr. Lees asked for costs, but the consideration of this was deferred. It was now proposed to take the cases against Joseph Molloy, but when his name was called Mr. Lees, who appeared for him, read a telegram he had received from his client, saying that he could not attend, and asking to let the case go on. Mr. Scott said under the circumstances they would like to see Joseph Molloy. The cases against him were adjourned until December 11th.—Michael McPartlin, of Clarrington Brook, pleaded guilty to selling butter containing about 12 per cent. of water, 80 per cent. of foreign fats, and not more than 10 per cent. of pure butter. Mr. Scott again prosecuted, and defendant was represented by Mr. James Wilson. Mr. Sumner deposed to sending an agent into the shop on the 4th of November, and purchasing 2lbs. and 1lb. of butter. He went in afterwards, and divided it into three parts for analysis. By Mr. Wilson: A boy served him with the substance. He asked for defendant, but was told he had gone to town. Mr. Wilson said he thought defendant was entitled to their consideration and sympathy. What was done took place without the knowledge of defendant. He went to town on the day in question, and left the lad, whom he had given definite instructions about the sale of margarine, in charge. He had made a mistake, for which he was very sorry, but his sorrow had come too late. The magistrates inflicted a fine of 40s. and costs, and in the three other cases against defendant he was ordered to pay the costs. The Mayor remarked that that being a first offence they had dealt with it very leniently. Any further offence in that direction would be punished more severely.

At Portsmouth on December 1st, Percy Wood, grocer, carrying on business at 137, Arundel Street, Landport, was summoned for selling on October 21st a quantity of butter which contained 28·70 per cent. of foreign fat. A fine of £3 3s. 6d., including costs, was imposed, or 14 days' imprisonment, a week being allowing for payment.—Robert Smith, grocer, of 163, Fratton Road, was charged with selling butter on October 21st to which 34 per cent. of foreign fat had been added. Defendant was fined £4 and 14s. costs. Mr. G. H. King prosecuted in both cases.

Assault on a Food Inspector.

At Dublin, on December 1st, Mr. Swift, gave judgment in cases of two assaults on Corporation Food Inspector Timothy Keogh by John Cogan, 6, Charlotte Street, and James Cullen, his assistant. According to the evidence given on a former occasion, Mr. Keogh called at Mr. Cogan's shop and asked to be supplied with a pound of butter marked "Sweet Wicklow." He was refused, and eventually when he attempted to take it himself, Mr. Cogan and Mr. Cullen assaulted him, knocked him down in the shop, cut his face, and destroyed his clothes with the butter. The case for the defence was that Keogh had no right to take the lump of butter. Mr. Rice, solicitor, prosecuted on behalf of the Corporation, and Dr. Faulkner instructed by Mr. W. E. Garland appeared for the defendants. Mr. Swift, in giving judgment, said four summonses in all were issued against the defendants, two for assault, and two for refusing to sell the butter which was alleged to be

exposed for sale on the defendant's premises. On the day of the hearing he was of opinion that any assault committed by Cullen, was of a very trivial character, and he dismissed the assault on that day, and held the other summonses over for careful consideration. Having stated in detail what occurred on the occasion of the alleged assault, namely, that Keogh asked the defendant for a pound of butter off the higher coloured portion of a piece which was labelled, "Sweet Wicklow." Cullen refused to supply Keogh off that portion, and offered to supply him off the paler part. The butter was then mixed up and Cullen after a conversation with Cogan, said it was sold. Keogh then took the lump of butter with the intention of taking a sample off it, but he had no implement to do so at the time. Cogan then forcibly took the butter off him, and with some assistance from Cullen assaulted Keogh. If he could come to the conclusion that the butter had been already sold he should dismiss the summonses, but he could not come to that conclusion, and the story of the sale was entirely an afterthought and a deliberate piece of perjury. He believed that Cogan used more force than was necessary to retain the butter. He fined Cogan £5 for refusing to sell the butter, and £2 for the assault, and he dismissed the remaining summons against Cullen.

GOLDEN SYRUP ADULTERATIONS.

At Sparnbrook Petty Sessions, James Hart, Thurleigh; Selina Pedley, Pertenhall; Abel Walker, Keysoe; John Thomas, Felmersham; William Darlow, Thurleigh; William Towl, Carlton; and Ann Eyles, Shillington, were all summoned for selling golden syrup not of the nature, substance, and quality required, on dates from September 19th to October 11th. The case of Darlow was taken first. Mr. W. W. Marks appeared on behalf of the police to conduct the prosecution, and called Inspector Mason, Inspector under the Food and Drugs Act, to give evidence. The Inspector said that he visited Darlow's shop and purchased a pound of golden syrup, paying 3½d. for it. The ordinary price of genuine syrup was about 2½d., but this contained 95 per cent. of glucose syrup, instead of cane sugar, from which the real article ought to be made. Mrs. Darlow said she had purchased the syrup from Bedford, and had sold the jars in the condition she bought them, supposing them to be genuine. The Chairman said the subject of analysis had been discussed in the County Council and had been carried out to a far greater extent than it ever had before, and with results for the good of the whole community. The defendant had the right of proceeding against the wholesale dealer, but the offence had to be seriously considered. The case against Hart was then taken. His jars contained 50 per cent. of glucose. Pedley's syrup contained 70 per cent., Walker's 75 per cent., Thomas's 65 per cent., Towl's 55 per cent., and Eyle's 80 per cent. Each of the defendants were fined £5. The defendant's were allowed six weeks for payment and advised to proceed in the County Court against the wholesale dealers.

At Liverpool, on November 20th, Michael Hevon, 52, Field Street, was fined 40s. and costs for selling as golden syrup a substance containing 75 per cent. of glucose syrup. Defendant said he bought the syrup believing it to be genuine.

At Newcastle-under-Lyme, John E. Blockley, grocer and provision dealer, of Newcastle-under-Lyme, was summoned for selling adulterated golden syrup on November 30th. Mr. Watson appeared for the prosecution, and Mr. Bell for the defence. Mr. Bell stated that the case was a purely technical one, and produced invoices to show that a high price was paid for the syrup. He asked the prosecution to withdraw the case on Mr. Blockley paying the expenses entailed. Mr. Watson said there was not the slightest intention to defraud in the case. The syrup was of good quality and harmless, but it was not "Golden" syrup, a distinction which has been drawn since

it was purchased. In reply to the Bench, Mr. Watson said there was no question as to the syrup having been tampered with since it was received from the manufacturers. The prosecution agreeing, the case was withdrawn on payment of costs.

At Nottingham, on December 1st, Henry Holmes, provision dealer, Sussex Street, was summoned at the instance of Mr. R. Burns, Inspector of Nuisances, for having in his possession for the purposes of sale a certain article of food, viz., 1-lb. of golden syrup, not of the nature, substance, and quality demanded. Mr. H. W. Day prosecuted. The syrup sold by defendant was adulterated with 80 per cent. of glucose. Defendant might plead that he bought the syrup without knowing of its adulteration, but this would not affect the question. Inspector Burns proved purchasing the syrup, for which he gave 2½d. He submitted it for analysis to the city analyst. The latter's report showed that it was adulterated with 80 per cent. of glucose. Dr. Boobyer, Medical Officer of Health, stated that golden syrup had twice the sweetening power of glucose. The latter was the product of the action of diluted sulphuric acid on starch. Defendant, who denied any knowledge of the adulteration, was fined 40s. and costs. —T. W. Betts, of 383, Alfreton Road, who did not appear, was charged with selling 1-lb. of golden syrup adulterated with 30 per cent. of glucose. Evidence was given by Inspector W. Betts. Mr. H. W. Day, who prosecuted, stated that defendant had made an application to the Health Committee in connection with the charge, and his absence was possibly due to some misunderstanding. A fine of 30s. was imposed.

CHEMISTS AND POTASH WATERS.

Manufacturers Summoned.

JOHN JAMES SHAWYER, chemist, of Wood Street and Faringdon Street, Swindon, was summoned by Mr. Sam Smith, Inspector under the Food and Drugs Act to the Wilts County Council, at Swindon, on November 27th, for selling potash water not of the nature and quality demanded. Mr. H. Bevir prosecuted, and Mr. A. E. Withy appeared for the defence. Mr. Bevir, in opening, said he wished it to be understood that there was no suggestion of fraud against Mr. Shawyer. Mr. Smith said he visited Mr. Shawyer's Faringdon Street shop and asked for a syphon of potash water, for which he paid 4½d. He sent a portion of the sample to Dr. Bernard Dyer, the county analyst, who had reported it to be "carbonated water, destitute of potash." The label on the syphon bore the words, "Potash water. Manufactured with filtered water." Cross-examined: The British Pharmacopoeia did not lay down how much potash there should be in potash water, and he did not care to lay down a standard himself. Mr. Withy for the defence, suggested that instead of proceeding under the Food and Drugs Act the prosecution should have taken action under the Merchandise Marks Act, in order that defendant might have had an opportunity of successfully showing that he was an innocent retailer. Mr. Shawyer was about to go into the box to state that he had not interfered with the potash water when the Chairman said the Bench saw no necessity for it. Mr. Bevir said he had intended to make it quite clear that no reflection was cast on Mr. Shawyer. The Chairman said that while none of the magistrates had the slightest doubt as to Mr. Shawyer's *bona fides* the proceedings were taken in the interests of the public and there must be a fine, though only a nominal one. Defendant would have to pay 1s. and costs.

EDWIN ROBERT ING, aerated water manufacturer, of Swindon, was summoned under the Merchandise Marks Act for applying a false trade description to a syphon of potash water delivered to John James Shawyer. Mr. Bevir again prosecuted, and Mr. Withy was for the defence. Mr. Smith said the label on the syphon bore the following words: "E. R. Ing & Co., Swindon. Potash water. Manufactured with filtered water. Please return this

syphon as soon as it is empty." Mr. Shawyer spoke to having purchased the potash water from Messrs. Ing & Co., and said, in answer to Mr. Withy, that he had supplied them with potash on several occasions. Dr. Dyer said the conclusion at which he arrived was that the sample submitted to him consisted of carbonated water, destitute of bi-carbonate of potash. Mr. E. R. Ing went into the box, and said it was his constant practice to put potash into potash water in the proportion of eight grains to the pint. He never attempted to sell "potash water" which did not contain potash. He also sold carbonated water, and he suggested that a potash water label was put on a syphon of carbonated water. The cost of potash was very small, and there was no desire on his part to save money or trouble. For the defence, Mr. Withy quoted a case in support of his contention that the magistrates could not convict unless they were satisfied that there was intent to defraud. It could not, he said, be suggested that Mr. Ing had given anything but a perfectly reasonable explanation, and if he did not deliberately intend to mislead Mr. Shawyer and his customers he was entitled to be thought innocent. The Clerk said Mr. Ing must prove his innocence. The only explanation he could give was that a mistake had been made by somebody. Mr. Withy said it was impossible to prove when the particular syphon of water was sold to Mr. Shawyer, and therefore defendant could not call the man who used the wrong label. Mr. Bevir, in reply, said Mr. Ing had made a perfectly fair suggestion as to the presence of the label on the bottle, but he must be held to have committed an offence under the section if he used a label which did not correctly describe the contents of the syphon. Mr. Withy reminded the Bench that there was no law which compelled Mr. Ing to put any label whatever on his syphons. The Chairman said the magistrates were unanimously of opinion that they had no alternative but to convict. They did not for a moment suppose that Messrs. Ing acted with the intention of committing a fraud, but at the same time—through some want of supervision or another cause—the public did not get what they believed they were buying. There would be a fine of 10s. and costs.

WILLIAM WILLIAMS, chemist, of Bridge Street, New Swindon, was summoned for selling potash water which was practically destitute of bi-carbonate of potash. Mr. Withy defended. Mr. Bevir said the syphon which Mr. Smith purchased was labelled to the effect that the potash water contained 30 grains of bi-carbonate of potassium to one pint. A sample was forwarded to Dr. Dyer, and his certificate was to the effect that the water contained less than a quarter of a grain to the pint. In answer to Mr. Withy, witness said Mr. Williams could not have interfered with the water unless he had a machine. The magistrates saw no difference between this case and that of Mr. Shawyer, and imposed a fine of 1s. and costs.

IBRIS & Co., Limited, aerated water manufacturers, of Pratt Street, Camden Town, London, were next summoned for applying a false trade description to certain syphons of potash water delivered to William Williams. Mr. Bevir said the label to which he had referred bore the name of the company. Evidence was given by Mr. Smith and Mr. Williams, the latter of whom described defendants as a reputable firm. Dr. Dyer said the sample of carbonated water contained hardly a trace of bi-carbonate of potash. Witness afterwards received from Mr. Smith two other syphons of potash water bearing the company's labels. Mr. Bevir was proceeding to question witness as to the quality of these samples, but Mr. Withy, for the defence, objected, and Mr. Bevir waived the point. Thomas Percival Chubb, secretary to the company, said he had made enquiries since the matter arose with the object of ascertaining where the discrepancy occurred. He suggested that it came about in this way: During the hot weather, when they were busy, soda or other water might have been left in the pipes and cylinders in which they combined the gas and the water, and some of it probably escaped the notice of the foreman and got into the potash

water syphons. There was no desire on the part of the company to sell "potash water" which did not contain potash. They employed a qualified chemist, whose duty it was to see that all the solutions were at full strength. Mr. Withy asked the Bench to say that defendants had acted in a *bona fide* manner, and the Bench, regarding the case as being on all fours with that of Mr. Ing, inflicted a fine of 10s. and costs. A second summons of a similar nature against the company was withdrawn.

WILLIAM EVANS, chemist, of Market Street, New Swindon, was summoned for selling potash water not of the nature demanded. Mr. W. Henderson, of Bristol, was for the defence. Mr. Smith said he purchased a syphon of potash water from defendant for 4d. and the label stated that it contained five grains of bi-carbonate of potash to each pint. The analyst's certificate stated that the sample was one of carbonated water, destitute of bi-carbonate of potash. Dr. Dyer, who was called at Mr. Henderson's request, said, in cross-examination, that he did not search for anything but bi-carbonate of potash. He had absolutely no doubt as to the accuracy of his analysis. Mr. Henderson said he proposed to call two analysts to prove that a portion of the contents of the syphon contained bi-carbonate of potash in the proportion of 6 grains to the pint. John C. Fell, analytical chemist to the Chemists' Aerated and Mineral Waters Association, said he had analysed a sample submitted to him, and found that it contained 6 grains to the pint of bi-carbonate of potash. He afterwards sealed up the bottle, and forwarded it to the Bristol branch of the company. Cross-examined: He made two examinations, and each produced the same results. He employed titration and the flame test, and these were undoubtedly the proper methods by which to search for bi-carbonate of potash; and he also examined the sample by means of the platinum-chloride test. He was prepared to say that the six grains of alkaline preparation in the sample were bi-carbonate of potash. He was able by the flame test to distinguish between the soda and the potash in the sample. Charles Henry William Gover, the Mineral Waters Association's chief clerk at Bristol, spoke to receiving the bottle and its contents from Mr. Fell, and submitting it to Mr. Stoddart, public analyst to the city of Bristol. Frederick Wallace Stoddart said the sample contained bi-carbonate of potash in the proportion of 5.95 grains to the pint and $2\frac{1}{2}$ grains of other solids. He applied two or three independent tests, and came to the conclusion that practically the whole of the alkaline in the sample was potassium bi-carbonate. Cross-examined: In one of his tests he arrived at the total solids, and then, forming an opinion from his knowledge of the Bristol water, made deductions, and calculated that the residue was potash. At this point Mr. Henderson said he was quite willing that Dr. Dyer and Mr. Wallace should make a joint analysis of the third portion of the contents of the syphon, and the case was adjourned to allow of this course being adopted.

Adjournments were also agreed to with regard to two summonses under the Merchandise Marks Act against the Chemists' Aerated and Mineral Waters Association, and with respect to a summons under the Food and Drugs Act against Joseph Henry Green, chemist, of Wood Street, Swindon.

COFFEE ADULTERATIONS.

A Record Specimen of Coffee.

At Kensington Petty Sessions, James Hampton, carrying on business at Oakley Crescent, Chelsea, was summoned at the instance of the Chelsea Vestry for selling a sample of coffee which was not of the nature and substance demanded. Dr. Parkes, the Medical Officer of Health, called evidence to prove the purchase, and produced the analyst's certificate, showing that the sample contained ninety-nine per cent. of chicory and one of sand. The Chairman: Then there was no coffee at all. Dr. Parkes: No. The defendant said he had no intention to

defraud; he purchased the article from a well-known firm in the City. The Chairman said the Bench were of opinion that this was a very bad case; a deliberate fraud. Defendant must pay a fine of £5, and 10s. 6d. the analyst's fee.

MR. WM. HY. STEAD CRABTREE, the new Derbyshire County Council Inspector under the Food and Drugs Act, summoned Jas. Street, grocer, Dronfield, for selling coffee which was adulterated with 45 per cent. of chicory, at Dronfield on October 23rd. Defendant pleaded guilty, and Inspector Crabtree said he purchased from defendant's shop four pennyworth of coffee. After he bought it and made the usual declaration, the daughter came in and told him that he had bought chicory and coffee, not pure coffee. Defendant was fined £1, including the costs.

ADULTERATED ARROWROOT.

At Thorpe, on November 27th, Ernest James Nevard, grocer, Little Clacton, was summoned for selling adulterated arrowroot. Sergt. Bridge said that some arrowroot that the defendant sold him was adulterated with 35 per cent. of maize starch. Defendant said he bought the arrowroot of a Colchester firm as genuine, and sold it as received. He was fined £5 and 11s. 6d. costs.

ADULTERATED WHISKY.

MR. WM. HY. STEAD CRABTREE, the new County Council Food and Drugs Inspector, went into the Blue Stoops Inn at Dronfield, kept by Charles Street, and purchased 1s. worth of Scotch whisky. The usual formalities with reference to the division of the whisky were gone through. Witness had had his part analysed by Mr. White, the county analyst, and he stated that there were 96 parts of whisky at 25 degrees under proof, and an excess of water 4 parts. The alcoholic strength was 28 degrees under proof. Mrs. Street appeared, and said she had cards in her house stating that all spirits were adulterated not under half proof strength. Inspector Crabtree said he looked for such a paper, but did not find one. Defendant was fined £1, including the costs.

THE USE OF PRESERVATIVES.

At Westminster Police Court, on November 30th, the hearing was resumed of the summons, at the instance of the St. George's, Hanover Square Vestry, against Messrs. Hudson Brothers, Limited, of Ludgate Hill, for using boracic acid (for preservative purposes) as an alleged injurious adulterant in clotted cream. Mr. C. F. Gill, Q.C., and Mr. A. W. Groser appeared for the defendants, and the prosecution was conducted by Mr. C. Munroe and Mr. Leese. A half-pound jar of Devonshire clotted cream sold at one of Messrs. Hudson's Pimlico establishments contained about 16 grains of boracic acid, the maximum single dose of the drug for an adult. For the prosecution, Dr. Francis J. Allan, medical officer of health for the Strand, stated that boracic acid occasioned dyspepsia and gastric irritation. He thought there would be no difficulty in preserving clotted cream in jars by cold storage or by the process used in sterilizing milk. Dr. J. C. Jackson, medical officer of health of Fulham, considered the use of boracic acid as a preservative most injurious, particularly to young hand-fed children. He was familiar with the effect of the drug on young kittens. Mr. Gill objected, as the experiments had not been made by the witness or in his presence. Dr. Jackson: The experiments of which I have general knowledge, confirmed my view of the pernicious effect of the drug. Mr. Gill, addressing the Court for the defence, urged that it was a most inopportune time to have instituted this prosecution, it being perfectly well known that the whole subject of the use of antiseptics and preservatives in food was under the purview of a Government departmental committee. The preservative was put in the cream when it was perfectly fresh to keep

it fit for carriage and consumption, and its use was really essential to one of the few increasing branches of business which benefitted English farmers. For the defence Dr. Bernard Faraday Giles put in evidence a comparative table showing the doses of boracic acid taken experimentally by Mr. Bond and other doctors. Mr. Shiel supposed the doctors were still alive.—Mr. Gill: Yes, sir, and going very strong. The witness in cross-examination said he was not aware that trade newspapers advertised boracic acid as a “sweetener” to mark staleness in milk, etc. Testimony as to the harmless effect of boracic acid in the very small proportions in which it was added to clotted cream was given by Drs. Edward Seton Pattison, James John Marsh, Ebenezer Bryceson, and other general practitioners of large experience. Dr. Attfield, Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, said it was necessary to use some sort of harmless preservative like boracic acid for clotted cream if it was to be used for commercial purposes. Cross-examined: Cold storage would do for transport, but not for distribution. At this point the case was adjourned for a fortnight.

IMPORTATIONS OF DAIRY PRODUCE.

THERE are some points in the recently issued report of Professor Thorpe, the principal chemist of the Government Laboratory, on the examinations of butter and milk made during the year ending March 31st, 1899, which call for further inquiry. The Professor states that “the use of artificial colouring matters derived from coal tar is now much in vogue, particularly in the United States, and to a less extent in Holland.” The nature and toxic properties of six commercial butter colours were lately studied in Pennsylvania by C. B. Cochran, and it was found that the colouring matter in the principal butter colouring preparations on the market was a coal tar product.

The first five samples were solutions of colouring matter in oil; the sixth was a finely divided powder. The coal tar colours found in the three first samples were found to be two in number—anilin yellow (aniedoaz olienzin) and butter yellow, a coal tar colour closely resembling methyl orange. It is well known that these coal tar preparations are very deleterious to health, and in some experiments which were specially conducted, with the object of putting the matter to a test, it was found that 24 to 32 drops produced headache, loss of appetite, nausea, vomiting, and nervous depression, the intensity of the symptoms varying according to the amount taken.

The next point in the Professor's report is as regards the use of preservatives. He says, “With regard to the use of boracic preservatives in butter, France again heads the list of European countries, Holland comes next, whilst Danish and Scandinavian butters were entirely free from this preservative. The majority of the butters from the more distant colonies, as Australia and New Zealand, contained boracic preservative.” He then adds: “The great majority of the margarines contained cotton seed oil, boric preservative, and aniline colouring matter.”

Now last year 269,324 cwts. of butter were imported from Holland, 416,821 cwts. from France, and 66,712 cwts. from the United States; also 844,177 cwts. of margarine from Holland, and 30,299 cwts. from France. What supervision of the health or cleanliness of the herds from whence these products were obtained, or what knowledge was obtained of the cause of the death of the animals from whence the margarine was obtained, we are not informed.

The health of the consumers of food is so very intimately connected with this question, as shown by the writings of numerous experts of the present day in relation to the health of the herds of the United Kingdom, that it surely cannot be too much to ask for some satisfactory evidence being given respecting the source of these enormous supplies of food for the people of the United Kingdom.

This raises another question, viz., where did the 817,268 cwts. of condensed milk, that were last year imported, come from? and what supervision was there of the herds supplying it, and the preservatives used? Was it coal tar, or some other less dangerous ingredient? Again, what of the 7,683,375 cwts. of hams and bacon, of the 3,309,166 cwts. of beef, salted or fresh; of the 988,924 cwts. of the various kinds of unenumerated meats, preserved otherwise than by salting; the 3,314,003 cwts. mutton, and the 833,555 cwts. of pork, salted or fresh, making together a grand total of 16,129,022 cwts.

We are told that the chief or the Dairy Division of the United States Department of Agriculture has just issued the result of the analyses of 29 samples of foreign made butter, and he states that boracic acid preservatives were found in the butters from New South Wales, Victoria, New Zealand, Argentine, France, Italy, and Ireland. The butters from Denmark, Sweden, Finland, Friesland, Holland, Canada, and England, did not contain boric preservatives—we are also told that France is in a strange position, with its use being allowed if it is for export but made penal if for home consumption.

The important duty of inquiring into the wholesome nature of the food of the people devolves upon the President of the Local Government Board. Many cases have been recorded of deaths arising from consumption of preserved meats. I remember that many years ago I suffered from doing so, and, therefore, feel justified in requiring the information I ask for.

T. DUCKHAM, Holmer, Hereford, September, 1899.

THE FOOD AND DRUGS ACT.

Circulars by the Board of Agriculture.

(Continued from page 583.)

CIRCULAR TO CLERKS TO LOCAL AUTHORITIES IN GREAT BRITAIN.

Sir,—I am directed by the Board of Agriculture to draw your attention to certain provisions contained in section 5, 6, 7, and 8 of the Sale of Food and Drugs Act, 1899 (62 and 63 Vict. ch. 51), which extends and amends the provisions of the Margarine Act, 1887 (50 and 51 Vict. ch. 29), and which will come into operation on January 1st, 1900.

By section 5 of the new Act the provisions of the Margarine Act, 1887, as amended by the New Act, are extended to “margarine-cheese,” which expression is defined by section 25 of the Act as meaning “any substance, whether compound or otherwise, which is prepared in imitation of cheese, and which contains fat not derived from milk.” The effect of section 5 is that no such substance can be lawfully dealt in, exposed for sale, or sold, except under the name of “margarine-cheese,” and under the conditions set forth in section 6 of the Margarine Act, 1887, with respect to margarine, *mutatis mutandis*; and the section further requires that all margarine-cheese sold or dealt in otherwise than by retail shall either be enclosed in packages marked in accordance with the Margarine Act, 1887 (as amended by section 6 of the new Act) or shall be itself conspicuously branded with the words “margarine-cheese.”

By section 6 of the new Act the brand or mark required under the Margarine Act, 1887, or the new Act, to be placed on any package containing margarine or margarine-cheese must be on the package itself, and not solely on a label, ticket, or other thing attached thereto.

The same section also amends the provisions of section 6 of the Margarine Act, 1887, so as in effect to require that every person selling margarine or margarine-cheese by retail, save in a package marked as aforesaid, shall in every case deliver the same to the purchaser “in” a paper wrapper (the words “or with” in section 6 of the Margarine Act, 1887, having been repealed); it also requires that the words “margarine” or “margarine-

cheese," as the case may be, shall be printed on the wrapper in capital block letters not less than half an inch long and distinctly legible, and that no other printed matter shall appear on the wrapper.

Section 7 of the new Act requires every occupier of a manufactory of margarine or margarine-cheese, and every wholesale dealer in such substances, to keep a register of consignments sent out therefrom, and empowers officers of the Board to inspect the register, and to enter manufactories of margarine and margarine-cheese and inspect the process of manufacture and take samples for analysis. It also extends the provisions of section 9 of the Margarine Act, 1887, relating to registration of manufactories of margarine, to any premises wherein the business of a wholesale dealer in margarine or margarine-cheese is carried on, and the registration of a manufactory or other premises must be forthwith notified by the local authority to the Board.

Section 8 of the Act provides that it shall be unlawful to manufacture, sell, expose for sale, or import any margarine, the fat of which contains more than 10 per cent. of butter fat; that every person who manufactures, sells, exposes for sale, or imports any margarine which contains more than that percentage, shall be guilty of an offence under the Margarine Act, 1887, and that any defence which would be a defence under section 7 of that Act shall be a defence under section 8 of the new Act, and the provisions of the former section shall apply accordingly.

Section 8, however, is not to apply to any margarine manufactured or imported in fulfilment of any contract made before July 20th, 1899.

The Board would be glad if you would take steps to bring before your local authority the foregoing summary of the provisions of sections 5, 6, 7, and 8 of the new Act, and they will be glad to forward you additional copies of this circular for distribution amongst the members of your local authority and the officers concerned, upon being informed of the number you require.

CIRCULAR TO CLERKS TO LOCAL AUTHORITIES IN GREAT BRITAIN.

Sir,—I am directed by the Board of Agriculture to draw your attention to the following provisions of the Sale of Food and Drugs Act, 1899 (62 and 63 Vict., ch. 51) which will come into operation on January 1st, 1900.

This Act should be read in connection with the existing statutes which it amends and supplements, viz., the Sale of Food and Drugs Act, 1875 (38 and 39 Vict., ch. 63), the Sale of Food and Drugs Act Amendment Act, 1879 (42 and 43 Vict., ch. 30), and the Margarine Act, 1887 (50 and 51 Vict., ch. 29). These three statutes together with the new Act itself, are in the new Act, and in this circular referred to as the Sale of Food and Drugs Acts.

Sale of Milk in a Public Place.

Section 9 of the new Act requires every person who, himself or by his servant, in any highway or place of public resort sells milk or cream from a vehicle or from a can or other receptacle to have his name and address conspicuously inscribed on the vehicle or receptacle, under a penalty not exceeding two pounds.

Labelling of Condensed Separated or Skimmed Milk.

Section 11 of the new Act provides that every tin or other receptacle containing condensed separated skimmed milk shall bear a label clearly visible to the purchaser on which the words "Machine-skimmed Milk," or "Skimmed Milk," as the case may require, are printed in large and legible type, and that if any person sells or exposes or offers for sale condensed separated or skimmed milk in contravention of this section, he shall be liable on summary conviction to a fine not exceeding ten pounds.

Notice of Mixtures.

With regard to notice of mixtures, it is provided by section 12 of the new Act that the label referred to in section 8 of the Sale of Food and Drugs Act, 1875, shall not be deemed to be distinctly and legibly written or

printed within the meaning of that section unless it is so written or printed that the notice of mixture given by the label is not obscured by other matter on the label; but this provision does not apply to the use of any registered trade mark or of any label which has been continuously in use for at least seven years before the commencement of the new Act.

Articles Sold in Tins or Packets.

Section 18 of the new Act provides that notwithstanding anything in section 17 of the Sale of Food and Drugs Act, 1875, where any article of food or drug is exposed for sale in an unopened tin or packet duly labelled, no person shall be required to sell it except in the unopened tin or packet in which it is contained.

Division of Samples.

The effect of section 13 of the new Act is to modify section 14 of the Sale of Food and Drugs Act, 1875, so that the person purchasing any article with the intention of submitting the same to analysis must divide the article into three parts, and must, if required, deliver one of the parts to the seller or his agent. The division of the sample is therefore obligatory, whether the seller requires it or not; and, on the other hand, the delivery of a part to the seller is not obligatory, unless he requires it.

Samples taken in course of Delivery.

By section 10 of the new Act, the person who takes a sample of milk in course of delivery (see section 3 of the Sale of Food and Drugs Act Amendment Act, 1879), or of margarine or margarine-cheese forwarded by a public conveyance (see section 8 of the Margarine Act, 1887, and section 5 of the new Act), is required to forward a portion of the sample marked, and sealed, or fastened up, to the consignor, if his name and address appear on the can or package containing the article sampled.

Section 14 of the new Act extends the provisions of sections 3 and 4 of the Sale of Food and Drugs Act Amendment Act, 1879, which relate to the taking of samples of milk in course of delivery, to every other article of food; but no samples are to be taken under the section except upon the request or with the consent of the purchaser or consignee.

Obstruction of Officer.

Section 16 of the new Act imposes fines not exceeding £20, £50, and £100 respectively for first, second, and subsequent offences on any person who wilfully obstructs or impedes any inspector or other officer in the course of his duties under the Sale of Food and Drugs Acts, or by any gratuity, bribe, promise, or other inducement prevents, or attempts to prevent, the due execution by such inspector or officer of his duty under those Acts.

(To be continued next week.)

EFFECTS OF BORAX AND BORACIC ACID ON THE HUMAN SYSTEM.

By DR. OSCAR LIEBREICH.

Publishers: J. and A. Churchill, 7, Great Marlborough Street, London, 2s.

THIS work makes a well timed appearance. Dr. Liebreich has written an exhaustive survey of all the experiments hitherto made in this field, but although his work may be undertaken purely in the interests of science on reading it an impression seems to be conveyed that it is an out and out apology for the use of borax in food stuffs. The passages favourable to the use of borax are specially marked and arguments adverse to borax in food vigorously combated. Dr. Liebreich's conclusions are "Experience has proved that 1·2 grammes of Boric Acid or Borax if taken in food daily, even for considerable time, does not affect health injuriously. Even quantities twice as large have not been proved injurious, scientific investigations having decisively demonstrated that these doses are far below the limit where deleterious action commences." There are a large number of feeding experiments on various animals, and twelve excellent coloured illustrations.

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Food and Sanitation.

SATURDAY, DECEMBER 16, 1899.

MILK PROSECUTIONS.

At Tottenham, William Graham, a farmer, of Marlesford, near Chelmsford, was summoned by Mr. A. Bridge, inspector of Food and Drugs, for selling new milk to a dairyman, named Bennett, which was adulterated with six per cent. of added water. Bennett was recently summoned at this court for selling adulterated milk. His excuse was that the milk was supplied to him by Graham under warranty, but the Bench convicted him, as it was not proved that the milk was not tampered with whilst at the railway station, the justices ruling that the warranty held good only until the station was reached. Subsequently Mr.

Bridge attended at the station and took a sample of milk from a churn consigned by Graham to Bennett. The milk was analysed and found to contain 6 per cent. of added water. Mr. Bennett gave evidence that the defendant contracted to supply him with pure milk. The defendant said no water was put into the milk while it was in his possession. The Bench imposed a fine 40s. and costs, which was far too little under the circumstances.

An Appeal to the Cow.

At Flint Borough Sessions, the case of the Police v. John Hughes, Maesydre Farm, under the Foods and Drugs Act, came on for hearing. The case was adjourned in order that further analysis should be made of the milk of a white cow, and also of a red cow kept by the defendant. Mr. R. Bromley appeared for the prosecution, and Mr. T. W. Hughes defended. Inspector Jones stated that on the evening of the last sessions on 8th November, he went to Maesydre Farm. He saw the white cow milked and in the usual way he purchased a sample of milk and carried out the provisions of the Act. He also took a sample of the milk of the red cow in similar manner, and took the samples to Mr. Lowe, the county analyst, at Chester. Witness said both cows gave about two quarts each. The analyst sent the certificates produced of the white cow and the red cow's milk. The certificates of the analysis were produced. The analysis of the sample of the white cow's milk showed:—Specific gravity, at 15.5 centigrade, 1028; fat 4.45 per cent.; non-fatty solids, 7.8 per cent. The sample would require the removal of 34 per cent. of cream or butter fat in order to reduce it to the quality of sample No. 8 (first sample analysed). In other respects the sample was of similar quality to No. 8, i.e., it did not show the addition of any water to sample No. 8. The sample was securely sealed. The report of the red cow's milk was to the effect:—Specific gravity at 15.5 centigrade 1031.5; fat, 8.1 per cent.; non-fatty solids, 9.92 per cent. The sample was of most exceptionally rich milk. No change had taken place in the constitution of the sample. Mr. Bromley: Assuming that the Bench come to a conclusion with reference to the water, I wish to address the Bench on the question of the fat. The Chairman: We do not think it necessary. Mr. Bromley: That applies to an important point of law. The Magistrates' Clerk: You may mention any point of law. Mr. Bromley: Suppose for argument sake the Bench had any doubt as to whether water had been added or not. I am prepared to show the fact of fat having been abstracted is sufficient to prove that a conviction can be given. The Magistrates' Clerk: You say that the fat has been abstracted? Mr. Bromley: That is the point. There were 2.94 per cent. of fat in sample No. 8, the milk of the white cow, the second sample analysed shows 4.45 per cent. of fat. The charge is that the defendant supplied milk 'not of a nature, substance and quality demanded.' Mr. Hughes contended that they were charged with selling milk containing 8 per cent. of added water. If it was sought to charge them with removing cream, application should be made to amend the summons. Mr. Bromley: The summons covers that. Mr. Bromley cited in support of his contention, *Blakewell v. Davies*, 62, L.T., 284; *Pain v. Boughtwood*, 54 J.P., 469; *Dyke v. Gower*, 65 L.T., 760; *Haywood v. Whitehay*, 76 L.T., 761. Mr. Hughes: The amount of fat in No. 8 sample is above the standard. Mr. Bromley: It is not. Mr. Hughes: I ask Mr. Lowe. Mr. Lowe, Chester, county analyst, was called and examined by Mr. Bromley, said the amount of fat in No. 8 sample was slightly below the standard. It was equal to 2 per cent. of cream removed. The standard was 3 per cent. If a cow's milk shows 2.94 per cent. of cream, and a month after 4.45 per cent., how would you account for the difference? Mr. Lowe: It is an extraordinary difference. The Chairman: Would the removal of cream alone from No. 11 sample lead you to believe that it would deteriorate it to the quality of No. 8 without the addition of water? Mr. Lowe: Yes, it would. Would that account for 8 per cent. of added water in No. 8?—No,

that is the fat—the butter in the milk. No. 8 sample must have had water added as well as cream removed?—The solids, not fat, is $8\frac{1}{2}$ per cent. standard. To reduce it to 7·8 requires about 8 per cent. of water. That is as far as water is concerned; the difference is in the fat. Mr. Hughes: Is not 3 per cent. the highest standard?—Some ten years ago it was $2\frac{1}{2}$ per cent. but it is now raised. Mr. Hughes: Is the standard not 2·75 per cent.?—No, 3 per cent. Mr. Hughes: Why did you not point out there had been a removal of cream to below the standard?—It was not worth while. Mr. Hughes said the certificate answered the case. They were charged with adding water to the milk. The second sample did not show the addition of any water to sample No. 8, and Mr. Lowe said it did not show the addition of water. The charge did not say anything about the removal of cream. He contended there was no case to answer and the prosecution failed. The Bench retired for a short time and upon returning to Court the Chairman said, the magistrates had gone into the case very carefully and fully, and they were of opinion that the prosecution had proven their case that the first sample of milk was adulterated with water and was not to the nature, quality and substance demanded. The defendant was fined 20s. and costs. Mr. Hughes, on behalf of his client, asked for a case, which was granted. The question of costs, more particularly applying to those of the County Analyst, was deferred.

At Lambeth, Francis Caggio, a restaurant keeper, of Old Kent Road, was summoned for selling milk from which 32 per cent. of the original fat had been abstracted without making disclosure of the alteration to the purchaser. The defendant did not appear. Inspector Groom said he visited the defendant's premises on the 12th of November, and asked for a glass of new milk. The article with which he was served was certified by the analyst to have had 32 per cent. of the original fat abstracted. Mr. Francis imposed a fine of 20s. and costs. George Fellowes, of Sumner Road, Peckham, was fined 20s. and costs for selling milk from which 40 per cent. of the original fat had been abstracted without making disclosure of the alteration.

MARGARINE PROSECUTIONS.

At Lambeth, William Porch, of Lingham Street, Stockwell, was summoned by Inspector Perrin, on behalf of the Lambeth Vestry, for selling as butter a mixture containing 78 per cent. of margarine. The defendant urged that a mistake was made in the serving of the article. Mr. Hopkins ordered the defendant to pay a fine of 20s. and costs.—Charlotte Morel, of Lingham Street, Stockwell, was summoned by the same Vestry for selling as butter a mixture containing 88 per cent. of margarine. It was explained that the defendant, a small shopkeeper, had been called away to a sick relative, and left the shop in charge of a young woman who was unacquainted with the business, and who made a mistake in serving the Inspector. The defendant was ordered to pay the cost of the summons, 12s. 6d.

At Lambeth Edward Lipscomb, of M'Dermott Road, Peckham, was summoned, at the instance of Inspector Groom, on behalf of the Camberwell Vestry, for selling as butter a mixture containing 72 per cent. of margarine. There was a second summons against the defendant for selling margarine without delivering it to the purchaser in a properly-printed wrapper. Mr. G. W. Marsden, solicitor to the Vestry, appeared in support of the summonses. The defendant, who pleaded that a mistake was made, was fined 20s. and costs upon the first summons, and was directed to pay 20s. costs upon the second.—Charles J. Angus, of St. George's Road, Peckham, appeared to answer three summonses taken out by the same Vestry—one for selling milk containing 13 per cent. of added water, the second for selling margarine otherwise than in a properly printed wrapper, and the third for exposing margarine for sale without having it labelled as required

by the Margarine Act. The defendant was fined 10s. and costs upon each of the three summonses.—Lewis Lloyd, of Nunhead Lane, was summoned for selling margarine as butter, and, on a second summons, for selling margarine without delivering it in a printed wrapper. On the first summons the defendant was fined 20s. and costs, but the second summons was dismissed.

At the Holywell Sessions, William R. Roberts, grocer, Bagillt, was summoned for two offences under the Food and Drugs Acts—first, with selling as butter a substance containing 77 per cent. of foreign fat and 21 per cent. of boric acid; and secondly, with exposing such for sale not labelled. Mr. F. Llewellyn Jones prosecuted, and stated how, on the 10th ult., the Inspector went to defendant's shop and asked for a pound of butter, pointing out a certain unlabelled block. The butter was served and analysed. Defendant denied selling the margarine as butter, but admitted that it was unlabelled at the time. The Bench fined defendant £3 in the first case, and £2 in the second, which, with costs, amounted to £6 19s. 6d.

At Edinburgh, James M'Leod, grocer, 48, Bristo Street, was charged before Sheriff Orphoot, with having upon the 15th of November, exposed for sale, contrary to the Margarine Act, margarine which was not labelled as such, and was supplied to Inspectors under the Food and Drugs Act without being wrapped in paper marked "Margarine" as required by the Statute. Mr. M'Leod pleaded guilty, with the explanation that no deception was practised. The Inspectors were informed by the shop assistant that the article was margarine. Sheriff Orphoot imposed a fine of £2 including expenses.

At the Bolton Police Court, James Johnson, grocer, Horwich, was called upon to answer two charges of selling adulterated butter. One sample contained 75 per cent. of fat, and another, which was marked "pure dairy butter," contained 80 per cent. The defence was that it was a mistake. Defendant was fined £20 and costs.

At Cranbrook County Sessions, Thomas John Barnes, grocer, Hawkhurst, was summoned for selling butter adulterated with margarine on October 13th, and also with exposing margarine for sale without it being labelled as such. Mr. Smith-Marriott, of Hawkhurst, appeared for defendant. P.C. Skinner gave evidence as to going into defendant's shop and asking for a pound of shilling butter. The analysis showed that the butter contained nine per cent. of margarine. For the defence it was contended that the article purchased was enclosed in a printed margarine wrapper, and that there had been no attempt to defraud. It was stated that the margarine was 1s. 2d. per lb., and that the label had accidentally dropped off. Fined 5s., with 1-4s. costs in each case.

At the Manchester County Police Court, before the Stipendiary and other justices, a number of grocers and provision dealers were summoned at the instance of Inspector Parkinson, of the Royal Lancashire Agricultural Society, for breaches of the Food and Drugs and the Margarine Acts. The first case taken was that in which the defendant was John Sunderland, grocer, etc., of 139, Wickentree Lane, Failsworth, he being summoned for having under the Food and Drugs Act sold adulterated butter, on November 7th. Mr. Parkinson said that on November 7th he went to the defendant's shop. He saw the defendant's wife, and asking the price of butter, she replied that the butter she had was not the same as she usually sold. He tasted the substance, for a lb. of which he paid 1s. The analyst's certificate showed that it contained $11\frac{1}{2}$ per cent. of water and 70 per cent. of fats other than butter fat. Witness was cross-examined by Mr. F. O. S. Leak, who appeared for the defendant. He admitted that the substance was not exposed on the shop counter, and seemed to have been got for to meet the wants of the factory people who had their meals at the shop. Witness further explained that the defendant's wife said they had run short of butter a day or two previously, and so she went to her usual shop, but it was closed. She

then called at "Molley's Whitney Irish Market," and there purchased two lbs. of butter, which she said was wrapped in a plain wrapper. Witness saw the wrapper when he went into the shop, and there were no words on it to the effect that the substance inside was not butter. Mr. Leak produced the wrapper in which the defendant had brought the substance, but said he had really no defence. It was a fact that the defendant had run short of butter, and so had gone to the "Irish Market," where she was served with what was called "pure Kiel butter." The Chairman: Then there is a remedy, and that is against the "Irish Market." Mr. Leak said that was so, but it would be very difficult to prove satisfactorily that the substance was the same as had been purchased from that shop, and so he asked the bench to consider the case as one between the court and the defendant alone. The Chairman said that had that been a case where the defendant had really been selling margarine for butter in a grocer's shop, he would have imposed a heavy penalty, for there would have been a fraud upon the public, but it seemed to him that the defendant's shop was practically a restaurant where the mill-people had their meals, and the substance was not exposed for sale. He thought the bench would not be doing wrong if they only inflicted a penalty of 5s. together with the costs.—Arthur William Hill, trading as Lyon and Co., of Oldham Road, Failsworth, was next summoned for exposing for sale margarine not properly labelled as required by the Act. Mr. Hocking appeared for the prosecution, and Mr. W. F. Farrington defended. Mr. Hocking stated that the defendant was charged with having on November 7th infringed section six of the Margarine Act of 1887, by exposing for sale on his shop counter margarine that was not duly labelled with large letters "margarine." Mr. Parkinson, said Mr. Hocking, went into the defendant's shop, and saw on the counter three different lumps of butter. One on the left was labelled "Finest Kiel" and the parcel on the right was marked "Finest new Irish." Immediately behind these two packages was another that was not labelled, and Mr. Parkinson asked what was its price. The defendant's manager replied that it was 10d. per lb., and so a lb. was purchased. The real value of the substance was about 4d. per lb. The analyst's certificate showed that the substance contained 9½ per cent. of water and 80 per cent. of fats foreign to butter. The suggestion was (said Mr. Hocking) that persons went into the shop, and seeing the labels as to the purity of the butter stuck about, expected to be served with pure butter, whereas they got a substance the price of which ought to be 4d. per lb. Mr. Parkinson went into the box, and bore out the statement of the prosecuting solicitor. Cross-examined by Mr. Farrington, witness said that when he called the attention of the shopman to the fact that there was no label upon the substance, he lifted up the bulk and under that there was an ordinary margarine wrapper such as would be supplied with a quarter of a pound of the substance. Mr. Farrington contended that the offence was purely a technical one, and ought to be dealt with as such. As regarded the price—10d.—he wished to remind the court that his client traded as the working's man's co-operative stores, and so when the inspector purchased the pound of margarine, he got a check for 1½d. Mr. Parkinson: Even then the margarine was sold at over 100 per cent. of its value. The Stipendiary Magistrate said that to his mind it was a clear case of fraud. There was a man trading as the working-man's friend, and yet selling margarine at a price which was more than double its real value. He would be fined 40s. and costs.—Benjamin Newton, grocer and provision dealer, Old Road, Failsworth, was then summoned for exposing margarine for sale which was not duly labelled as required by the Act. Mr. Hocking again prosecuted. He said that on the 3rd November, the inspector went into the defendant's shop, and asked for some butter, pointing to some bulk that was upon the counter. He was told that the piece on the left was 10d., the middle one 1s., and the piece on the other side 1s. 1½d. He said he would take a pound of that butter at 10d., and also that at 1s. The

defendant then said "these are mixtures." The inspector said the law did not recognise mixtures—they were either margarine or butter. Both of the samples were analysed, and the analyst's certificates showed that the samples were exactly the same, each containing 10 per cent. of water and 65 per cent. of fats foreign to butter. Defendant said he did not know that he was committing an offence if he told the purchaser that it was margarine or mixture. He had not been in business before, and for that substance he had paid 80s. Therefore, he was not getting very much profit when everything was taken into consideration. The Chairman said the defendant would be fined 20s. and costs in the two cases.—Helen Hale, 185, Oldham Road, Failsworth, was next summoned for not having margarine not duly labelled on the counter of her shop on November 3rd. The substance for which the inspector paid 1s. per lb. contained 13 per cent. of water and 70 per cent. of foreign fats. The defendant said she only got two pounds as a sample from a man who was very pressing that she should buy. She paid 9d. per lb. for it, and found that on her invoice it was marked "margarine." She was fined 10s. and costs.—A fine of 10s. and costs was imposed upon Hannah Dawson, of Cross Lane, Gorton, for a similar offence.

In the Belfast Summons' Court, before Mr. Nagle, R.M., Messrs. P. and F. McGlade appeared to answer a charge brought by Inspector M'Master for committing three offences under the Margarine Act. The Inspector deposed that he entered the Peter's Hill Branch of the firm, and saw a quantity of what appeared to be butter unlabelled. He also purchased some, which turned out to be margarine. It was delivered to him in a wrapper without the word "margarine" upon it. The Inspector further deposed that during the time he was in defendant's shop seven customers were supplied from the same lump, which was publicly exhibited. They were charged butter price for the article. The defence was that the offence was committed by the assistant, and was against the wishes and instructions of the firm. Mr. Nagle said the defendants were responsible, and as it was a very glaring case, he would fine them £10 and costs.

At the Bolton County Police Court, James Johnson, grocer, Horwich, was charged on two counts, with selling adulterated butter, and was further charged with not having margarine properly labelled, and also with selling margarine on a paper not properly marked on the 16th November. Mr. G. Fernihough appeared to prosecute for the police, and Mr. Horridge represented the defence. Mr. Fernihough said the case was about as bad as any that had been brought into Court, and was deserving of a very severe penalty. Mrs. Foy went into the defendant's branch shop and purchased 1lb of butter for 11d., and on analysis it contained 75 per cent. of foreign fats. At the same time she purchased a further sample of the best butter at 1s. 1d., and which was labelled "Pure dairy butter," and this on analysis contained upwards of 80 per cent. of foreign fats. The manager tried to communicate with the defendant by means of a note, and as to it being put in a lengthy argument ensued. The Magistrates decided that it should be put in, and Mr. Fernihough said the note contained the words, "Sell pure butter: inspector about. Come down straight away." As to the other charges Mr. Fernihough said that the butter ought to have been labelled with "Margarine" in 1½-inch capital letters, and the paper it was wrapped in ought to have had the word "Margarine" on it. Evidence was given in support by Mrs. Foy, P.C. Dunnion, W. H. Dinden (a boy who was sent with the note), and P.C. Kelley, who got the note from the last witness. Mr. Horridge stated that the note never reached the defendant. The defendant had two shops, and the sample taken at the head shop was all right. In explanation of this offence he said that the shopman had been cleaning down, and there being several lots of butter and margarine he had got the labels mixed. It was a bona-fide mistake, and he asked the magistrates to inflict a nominal

penalty. The shopman, William Maskell, said that through cleaning down he had got the margarine label on the butter and the butter labels on the margarine. The defendant said that when he called at the shop he had to set the labels right. The magistrates said the adulterated butter case was as clear and as bad as had ever been brought into court, and the defendant would be fined £10 and costs for each offence, and in the Margarine Act offence the penalty was £1 and costs in each case. Two guineas were allowed as advocate's fees.

At Lambeth Police Court, Thomas Sheldon, of Grosvenor Terrace, Newington, S.E., was summoned for selling butter not of the nature, substance, and quality of the article demanded. Inspector Selby produced a certificate from the analyst showing that the sample contained 90 per cent. of margarine. Defendant said he was not at home when the sample was taken. He put butter and margarine on separate plates on the butter slab, and his wife, who served the sample, did not know "which was which." He considered it a hard case, because he had only been in the place a few days. Mr. Francis ordered defendant to pay a fine of 20s. and costs.

WILLIAM BOYD, 31, St. Domingo Street, was summoned at the Oldham Police Court, for selling margarine for butter, and for selling margarine without a proper wrapper. Mr. Hallsworth (deputy town clerk) prosecuted, and stated that since the summons had been served the defendant had shut up the shop and decamped. Under the circumstances he applied for a warrant for his arrest. The warrant was granted.

At Bristol, Frederick James Cornish, grocer, 75, Hitwell Road, was summoned for selling margarine for butter: for selling margarine not labelled in accordance with the Act; and for keeping margarine exposed for sale without affixing the label "Margarine" to it. Mr. Roberts prosecuted, and stated that on November 4th, Mrs. Burnley went to the defendant's shop and asked for half a pound of butter. She was supplied with margarine. It was in plain paper, and served from a large box at the end of the counter. Defendant pleaded that the margarine had got mixed with the butter by mistake. The Bench characterised the offence as a serious one; the public, particularly in such a poor neighbourhood as that in which the defendant's shop was situated, must be protected. They imposed a fine of £3 and costs.

SWEET SPIRIT OF NITRE.

At the County Police Court, Huddersfield, Dennison Priestley, grocer, Golcar, was summoned for having on the 27th of October, by the hands of Ann Priestley, his wife, sold to Herbert Newbould, inspector of food and drugs under the West Riding County Council, a quantity of sweet spirit of nitre which was not of the nature, substance, and quality demanded by the purchaser. Mr. F. A. Reed (Messrs. Learoyd and Co.) was for the defence and pleaded not guilty. Herbert Newbould stated that on the 27th of October he was taking samples of food and drugs in the Golcar district, and called at the defendant's shop and asked to be supplied with 3oz. of sweet spirit of nitre. The defendant's wife supplied him, and he paid 1s. for the nitre. He told Mrs. Priestley what he had bought the nitre for, and that he had intended to divide it into three parts, and he offered her one of the three parts, which she accepted. He sent one part to Mr. Allen, the county analyst at Sheffield, and he had received a document in the form of a certificate, which said the sample contained the parts as under: "Ethyl nitrite (nitrous ether) 0.53, alcohol and legitimate water 99.47. The sample contains little more than two-sevenths of the real ethyl nitrite, which is the most active and characteristic constituents of sweet spirit of nitre, and which is regarded by the British Pharmacopœia to be present in a proportion of not less than $1\frac{3}{4}$ per cent., even after the preparation has been kept for some time, when the vessel containing it has been

occasionally opened." Mr. Reed objected to that part of the document which comes under the head of "observations," which he said were held to be unauthorised, but in that case the analyst was called as a witness. In this case the analyst could not be called as a witness as he was not there. There was no doubt the former Act included the observations. Mr. Greenwood: Do you deny that the observations can be put in? Mr. Reed: Yes sir. Mr. Sykes (the clerk): The certificate is a legal document which speaks for itself. Mr. Reed said no doubt that that was so, but the observations were unauthorised. The Bench, however, admitted the "observations" appended to the certificate. In cross-examination, Mr. Newbould said he went to the shop to inquire about the weights and measures. He did not notice the name over the shop door. It was not a chemist's shop, but toys as well as groceries were sold there. He knew nothing about ether, except that it was a remedy for colds. He did not know that prior to 1898 sweet spirit of nitre was made from rectified spirits and from nitric acid, and that it might contain no ethyl nitrite. He saw the nitre in the window. He did not know that there had been a crusade with regard to sweet spirit of nitre; he believed that the defence commonly set up in these cases was that sweet spirit of nitre was volatile, and would be likely to evaporate. He knew that it was recommended that sweet spirit of nitre should be kept in a dark place, and in small bottles. The bottle in which the defendant's sweet spirit of nitre was kept was in a warm, light place—the shop window. He did not suggest that anything had been added to the liquid. Mr. Reed said he was only instructed in the case on the previous night, and it was too late to give notice for the attendance of the analyst, and he did not think that having regard to the defendant's position he would have been at the expense of calling the analyst. There had been no fraud; and if the defendant had been guilty of any offence it had been entirely unwittingly. Prior to 1898 sweet spirits of nitre was made from rectified spirit or nitric acid, and it was laid down that it might contain little or no ethyl nitrite, but it was a popular stimulant. Sweet spirit of nitre was used in the country districts as a stimulant in the case of colds, to be taken in gruel. There was no suggestion that there was an undue proportion of water in the sweet nitre. In reply to the Court, Mr. Newbould said the sweet spirit of nitre was in a glass-stoppered bottle. Mr. Reed said it had been in the bottle since March, and having been in a light place and in a warm sun-lighted window it was likely to have greatly deteriorated, especially as the "stopper" would have to be taken out whenever any customer came to the place. But he did not rely on this so much as on the point he was now about to raise, which was that the authorities had summoned the wrong person. The sweet spirit of nitre was sold to Mr. Newbould, not by the defendant, but by his wife, and therefore she ought to have been summoned as the servant or agent, or the defendant must be shown to have had a guilty knowledge. He should call the defendant, who would say that he absolutely did not know anything about the case, as he was not at home at the time. Mr. Reed then quoted several cases to show that the wife ought to have been summoned, or failing that that the defendant must have had a guilty knowledge of the transaction. This was a criminal statute, and must be strictly construed. It was not a case where the defendant intended to deceive the public, and the explanation of the condition of the liquid was that the spirit had evaporated through being in a place which was exposed to sunlight. The point, however, on which he relied was that the wrong person had been summoned, and that if they still proceeded against the defendant it must be shown that he had a guilty knowledge. Mr. Newbould, on being asked what he intended to do in the matter of reply on the point of law, said he was not a lawyer, and he asked that the case might be adjourned, as the point was so important that he ought to have legal assistance. Mr. J. H. Sykes, the magistrates' clerk, said he could not understand why the West Riding County Council was not represented by a solicitor, as the

point raised was so important. The Chairman (Sir Thomas Brooke) said the present mind of the Bench was in the direction of dismissing the summons in face of the point raised by Mr. Reed and the cases he had quoted support. After some conversation, it was arranged that that the case should be adjourned for a month on Mr. Newbould paying a guinea and a half expenses. This Mr. Newbould agreed to do, and the case was adjourned.

ADULTERATED COTTON-SEED OIL.

At Kidderminster a short time back something went seriously wrong at the fried-fish shop of one John Brooks of that town. Persons who partook of the fish sold there found it did not agree with them. They were taken ill in varying degrees of sickness, and some were almost prostrate. Complaints poured in upon the proprietor, who was at his wit's end to know what was the matter. Ultimately he sent for the Sanitary Inspector. There was nothing wrong with the drains, so it was not microbes that were to blame. Ultimately he submitted the frying-oil to the Public Analyst, and that officer soon put his finger upon the cause of trouble. The oil employed was cotton-seed oil—a very nutritious extract, largely used, it is said, in America in the production of lard; but in this instance it was found to contain 25 per cent. of mineral lubricating oil, the effect of which, according to the analyst, would be to render the fish “very indigestible, and likely to disagree with consumers.” The result was an action at the Birmingham Assizes, in which the proprietor of the fish-shop sought to recover damages from Messrs. Skelton and Company, of Hay Mills, Birmingham, from whom the oil had been purchased. There was no evidence as to how the lubricating oil got there, the defendants giving evidence that oil from the same tank had been sent to other shops without any untoward result, and that the bulk in the tank was all right. They suggested either that some of the oil from plaintiff's cask had been purloined in transit and the deficiency made good with the lubricant, or that, possibly, an enemy of the plaintiff had been at work to damage his business. His business certainly was damaged very seriously, for the takings fell off as much as £5 or £6 a week. The possible explanations suggested by the defence failed to commend themselves to the jury, and, of course, it was highly improbable that the plaintiff himself would be guilty of so absurd an adulteration. It was more probable that some mistake was made at the defendant's establishment, where the former commodity is sold, as well as the latter. A verdict was accordingly given for £10 damages, which should serve both to rehabilitate the reputation of the plaintiff's establishment and to inculcate the need for very close vigilance in the handling of goods at drysalts' depôts.

ADULTERATED CAMPHORATED OIL.

At Pontypool Police Court, Bell, Sons, and Co., wholesale dealers, Liverpool, were summoned for applying a false trade description to three bottles of camphorated oil sold to Thomas Evans, grocer, Six Bells. Mr. More, who prosecuted, said his instructions were to press the charge, although the defendants, who were large drug merchants at Liverpool, had pleaded guilty. The firm had been proceeded against at various courts. On July 13th, 1899, they were prosecuted at Kingston-on-Thames for camphorated oil and fined £5; on September 25th, they were proceeded against at Swindon for selling an adulterated article and fined £10 and £11 14s. costs; at the same court on the same date for camphorated oil they were fined £1 and £6 9s. costs; on July 5th, 1899, at Durham, they were fined £20. On these grounds he asked the Bench to take a serious view of the case. The County Analyst certified that the sample was deficient of 75 per cent. of its active principle—camphor. Mr. Bythway, for the defence, said that his clients had been placed in a very unfortunate position in this as well as in the other cases.

They admitted that they had labelled this as genuine camphorated oil. They purchased their oil from the refiner, and until November, 1898, they believed that the oil they had been purchasing was genuine olive oil. They thought they could trust the refiners. On the face of this they labelled the oil as genuine camphorated oil. Immediately they discovered their position, they printed notices and sent them to their customers, saying that there had been a mistake made in the quality and requesting them not to sell any old stock. The Bench said a fine of £25 would be inflicted, and defendants would be ordered to pay the costs, £10 10s. The magistrates had been fining small tradesmen for the very same thing, for offences of which they were perfectly guiltless, and when they had the right men before them they should make examples of them.

Four Birmingham chemists were summoned at the Victoria Courts, on December 8th, before Messrs. W. N. Fisher and F. Wright, for having sold camphorated oil not constituted according to the British Pharmacopœia. William Curtis Miller, trading as Miller and Son, 107, Hockley Hill, was summoned for having sold camphorated oil containing only 87 per cent. of the proper proportion of camphor. The defendant pleaded that the oil was liable to evaporation, which could not be avoided. A fine of 20s. and costs was imposed. Samuel Partridge, 37, Grange Road, was summoned for having sold camphorated oil containing only 87 per cent. of the proper proportion of camphor, and at least 50 per cent. of foreign oil. Mr. Adcock defended, and stated that the ingredients had been mixed only the night previous to the sale, and the camphor had not properly dissolved. With regard to the oil, he stated that the defendant bought it from a Mr. John Cox as pure olive oil. In replying to Mr. Fisher, the defendant said that it was not customary for chemists to test their drugs when they purchased them from respectable firms as pure articles. Mr. John Cox, who also bought the oil as pure from a Liverpool firm, confirmed the defendant's statement, and Mr. Fisher said the magistrates were astonished that chemists should not examine the drugs they received. It seemed incredible. He did not think the public knew it, and the Bench certainly did not. Defendant would be fined 40s. and costs. Emma Evans, 55, Cattell Road, was fined 20s. and costs for having sold camphorated oil containing only one-fourth of the camphor prescribed by the British Pharmacopœia; and James Steen Harvey, 29, Arthur Street, was fined 40s. and costs for having sold camphorated oil containing only two-thirds of the due proportion of camphor.

ADULTERATED COFFEE.

At Edinburgh, Peter Ballantyne, grocer, 9, East Richmond Street, Edinburgh, was convicted of selling a pound of what purported to be coffee, but which was adulterated by the addition of 20 per cent. of chicory. The inspectors were served by a lad who had only been in the shop two months, and the defence was that it was an oversight on his part. The Sheriff said he regarded this as a technical contravention, and imposed a fine of 10s. 6d., with expenses.

ADULTERATED DEMERARA SUGAR.

At Porth Police Court, the adjourned hearing was to have taken place of the summons which had been taken out against William Rees, grocer, Cymmer, for having, it was alleged, sold Demerara sugar, not of the nature, substance, and quality demanded by the purchaser. Mr. Watkins (Pontypridd), who represented the wholesale firm that supplied the sugar to defendant, again appeared on their behalf. At the initial hearing Mr. Wilkins explained to the magistrates that the article sold, namely, raw sugar, was of the nature, &c., demanded, and that all sugars coming from Guiana or any of the West India

Islands was pure cane sugar, and so the purchaser could not be prejudiced in any shape or form. A certificate had been handed in at the former hearing, from the county analyst, which stated that the sugar in question was "100 parts crystallised sugar, coloured." Mr. Watkins disputed this, and it was agreed that the matter should be referred for further independent analysis by the Somerset House authorities. The certificate was now handed to the Bench. The Somerset House authorities certified that the sample sent to them was "pure cane sugar with a trace of dye." The Police Superintendent remarked that under the circumstances he did not offer any evidence; and after reading the certificate the Magistrates dismissed the case.

ALLEGED REFUSAL TO SELL FOR ANALYSIS.

At Westminster, Messrs. Pearks, Gunston, and Tee (Limited), tea and wine and spirit merchants, of Bayer Street, Golden Lane, were summoned for refusing to sell a bottle of rum from their Lower Belgave Street, Pimlico, establishment, to an inspector under the Food and Drugs Act. Mr. Hitchens prosecuted for the Vestry of St. George, Hanover Square, and Mr. Beck defended. Mr. W. H. Temple, one of the inspectors under the Act, asked for a bottle of rum, and one was taken from a fixture at the back of the counter. The assistant said it was not labelled, but he had marked it 33 under proof. Whilst the inspector had some money in his hand and other money on the counter ready to pay, the assistant obtained a properly labelled bottle and substituted it. He refused to sell the first bottle, though specific demand was made for it. Mr. Beck said the assistant had only erred on the side of caution. As a matter of fact, the bottle not supplied was old stock, only 17 under proof. The summons must fail, as there was no actual tender of payment by the inspector. Mr. Horace Smith was of this view, after hearing the vestry's solicitor, who ultimately took on himself to withdraw the summons.

BAD MEAT IN BIRMINGHAM.

At the Birmingham Police Court before Messrs. Chamberlain and Bolding, Alfred Featherstone, butcher, 47, Nelson Street, Parade, was summoned for exposing for sale twenty-seven pieces of pork, three pieces of beef, and three pieces of mutton, which were unfit for human food. Mr. Hiley (Deputy Town Clerk) appeared for the prosecution. Inspector Arthur Wiltshire stated that he visited the defendant's shop on the 2nd November, and found the meat exposed for sale. It was all bad. He seized it, and it was condemned. Dr. Alfred Hill (Medical Officer of Health for the city) said the meat was in a state of decomposition, and was unfit for human food. The defendant stated that it was a very wet day when he purchased the meat and he thought it was discoloured slightly because the wet had got in. He was fined £5, and costs.

WILLIAM BROWN, butcher, 62, Coleshill Street, was summoned for exposing for sale a quantity of pork which was unfit for human food, and W. Masters, carriers, Coleshill, and Henry Smith, Coventry Road, Coleshill, caretaker, were summoned for aiding and abetting Brown. Mr. Hiley said that on the 24th October, Smith killed a pig which was suffering from tuberculosis. The pig was given to Masters, with instructions to sell it to a meat salesman in Birmingham. Masters sold it to Brown, who exposed it for sale. The surface of the breast was covered with tubers. Masters said he paid £1 0s. 7d. for the pig, and sold it at 5d. per lb. Mr. Chamberlain pointed out that Masters had sold for £1 0s. 10d. that which he had bought for £1 0s. 7d. Smith said the pig had been ailing ever since he had had it, and that was the reason he had ordered it to be killed and sent to Birmingham, "the same as many others do." Dr. Alfred Hill said the meat was very dangerous as food, as it contained the germ of consumption. Any butcher should know that it was

diseased. Mr. Parker, veterinary surgeon, said that it was the worst case of tuberculosis in a pig that he had ever seen. Ignorance was pleaded in defence. Mr. Chamberlain: When we have consumption introduced into human beings it is all very well to say it is a mistake. If he had eaten it all himself I should not have minded so much. A man had better not be a butcher if he cannot be quite sure he is selling good meat. The charge against Masters was dismissed. Smith was fined £10 and costs, or in default one month's imprisonment, and Brown was fined a similar amount. Brown: I am only a poor chap, I cannot afford to pay it. Mr. Chamberlain: We have been thinking about that, but we have to consider the health and lives of the people. We must have it understood among you gentlemen what the dangers are. Even a poor man is not at liberty to introduce a disease amongst his neighbours. Brown was allowed seven days in which to pay the fine.

AMERICAN AND IRISH HAMS.

IN the Southern Divisional Police Court, Dublin, before Mr. Byrne, Q.C., two summonses were listed for hearing under the Merchandise Marks Act at the suit of Chief Inspector Lowe, Dublin Metropolitan Police, the real complainants being the Bacon Curers' Association of Great Britain and Ireland. Maria Silke, 18, South Richmond Street, Dublin, was charged that she "did on September 23rd last sell certain goods—to wit, a piece of ham about 3 lbs. in weight—to which the false trade description 'Irish ham' was applied, contrary to Statute 50 and 51 Vic., chap. 28, sec. 2, sub-section 2." There was a similar charge against Patrick Doyle, 29, Thomas Street. The case against Mrs. Silke was first gone into. Mr. A. N. Ward, inspector of the Bacon Curers' Association, deposed that he visited the defendant's shop at 18, South Richmond Street. There was a shopman, who gave the name of Mathew Fallon, behind the counter. Witness asked him for a small Irish ham. He replied that he had not got a small one, but he produced a portion of a ham and asked if that would suit. Witness asked if it was Irish, and the assistant replied that it was. The piece weighed 3 lbs., and witness paid 1s. 10½d. for it, or at the rate of 7½d. per lb. He asked for a bill, and having got it he observed that it did not contain the word "Irish." He handed the bill to the assistant and asked him to write in the docket that it was an Irish ham. He said it was not usual, but that the ham was Irish all the same. Witness then said: I suppose I must take your word for it. He then left the shop without announcing the object of the purchase. The ham was not Irish; it was American. He again visited the shop on September 29th, he produced the ham to the assistant, asking him if he remembered having sold it on the previous Wednesday. The assistant said, "Yes." Witness asked him if he still adhered to the statement that it was an Irish ham. The assistant then said, "No; It is an American. I did not guarantee it as Irish. It is only an Irish-cured ham." In reply to Mr. Gerald Byrne, who defended, Witness denied that he pointed out a particular piece of ham and asked the assistant to give it to him. The price of good Irish ham would be 11d. to 1s. 1d. a lb. He did not see Mrs. Silke, the defendant, in the shop on either occasion. For the defence, Mrs. Silke's Manager said he was in the shop on both occasions that Mr. Ward called. Mrs. Silke knew nothing whatever about the transaction until the complaint was made. She had given instructions to all the assistants not to sell any article except for what it was. That was being carried out so far as he knew and under his supervision. Mr. Byrne said there was no controversy about the fact that the defendant, Mrs. Silke, had nothing to say to this transaction. He submitted that under the section of the Act under which the summons was brought, it was the assistant who made the sale and not the defendant, who should have been prosecuted. The section said: "Every person who sells, exposes for sale, or has in his possession for trade or manufacture any goods to which a false trade description is applied, or a trade

description which is calculated to deceive, unless he proves that he has taken all reasonable precaution against the committing of such offences or otherwise that he acted innocently." There was the exception in favour of a person who had taken reasonable precaution. The defendant in this case gave instructions that this sort of thing was not to be done, and there was not a single article in the shop to which a false trade description was applied. The assistant was the guilty party, and it was he who should be summoned. The Magistrate said the actual seller of the article had guilty knowledge. Mr. Byrne: That knowledge does not affect the defendant. Knowledge on the part of the shopman cannot be construed as knowledge on the part of the defendant, and should not apply in a case like this punishable by imprisonment. The Magistrate: How would the Act of Parliament be carried out if your contention was upheld as the right one? Mr. Byrne said the defendant was liable if the article was exposed in the shop labelled as Irish ham. This transaction entirely took place between Mr. Ward and the shop assistant, and he contended that the assistant and not the defendant was the seller. If an assistant refused to sell a sample of margarine it was he and not the proprietor of the shop who was liable to the prosecution. Mr. Tobias said the plain inference here was the sale was effected by the assistant for his employer's profit. The word "knowingly" was introduced in another Act, but was not here. If Mr. Byrne's contention was correct, any corporate body could ride off on the plea that they knew nothing of what was done, and that they were not the sellers. If Mr. Byrne's contention were followed it would negative the whole operation of the Act. It was absurd to pretend that these assistants were making liars of themselves except for their employers' profit. This sort of thing was a gross fraud on the community, and it was inflicting a scandalous injury upon a manufacture which was one of the few industries that remained in Ireland. It was really too bad that the vending of cheap, inferior foreign stuff at the full trade price of the Irish article should be permitted. In his judgment it rendered the parties liable to a prosecution for taking their customers' money under false pretences. The Magistrates imposed a fine of £5 and costs.—A similar summons against Mr. Patrick Doyle, 29, Thomas Street, Dublin, was then gone into. Mr. Ward said he asked the assistant, James Lawler, for a small Irish ham. He gave him one, but he asked for a smaller one. He produced another ham and said: This is a nice ham. Witness asked if it was Irish, and he replied that it was. The price was 6½d. per lb. It weighed 10 lbs., and he paid 5s. 5d. for it. He asked for a bill, and the assistant made it out. Witness pointed out that the word "Irish" was not on the bill, and then the assistant took it back and inserted the word "Irish" after "ham." The bill (which witness produced) was as follows:—29, Thomas Street, September 26th, 1899.—Bought of P. Doyle, provision merchant and Italian warehouseman, 10 lbs. ham, Irish, 5s. 5d. Paid, with thanks. On the following Friday he again called at the shop, and the assistant admitted that it was an American ham. He then asked the assistant why he sold it and described it on the bill as Irish, and he said, "I could not sell you an Irish ham at 6½d. per lb. If we told people that it was American they would not buy it at all. I ask you to overlook it." In reply to Mr. Brady, who appeared for the defendant, witness said he did not see Mr. Doyle in the shop. He knew at the time of purchasing that the ham was American, and notwithstanding that he asked the assistant to describe it as "Irish" on the bill. He could not get Irish ham for 6½d. a lb., but that was not his business. No real Irish ham could be bought for 6½d. a lb. Mr. Brady asked the summons be dismissed on the ground that the seller was Maguire and not the defendant Doyle. There was no name on the bill to show who sold the article or who purchased it. The statute expressly said every person who sold or exposed for sale; it did not specify, as the Food and Drugs Act did, every person who sold or exposed or whose agent or servants did so. That

distinction was made in the Merchandise Marks Act, he contended, for the purpose of safeguarding traders against the malpractices of assistants. Mr. Doyle had been several years in the trade, and there was never any complaint or prosecution against him. He would not tolerate the sale of an American for an Irish ham, but he could not help what his assistant did in his absence. The ham was originally given to Mr. Ward as a ham, and it was at Mr. Ward's suggestion that the assistant said it was Irish. Was that a case in which the absent proprietor was to be held criminally liable for the act of his assistant, on the suggestion of the prosecutor? James Lawler, the assistant, said he sold the ham, which was American ham, as Irish. Mr. Doyle knew nothing about the transaction. He was away in the country doing business at the time. Witness did not tell him about it until after Mr. Ward had called the second time. Mr. Doyle had given him instructions not to sell American ham as Irish. In reply to Mr. Tobias, he said they had no Irish hams in the shop. In reply to further questions, Witness said he sold the ham for his employer's profit. Mr. Byrne (the magistrate) held that the sale by the shopman was a sale by the shopkeeper, whose billheads were used in the docket given, and he fined the defendant £5 and costs.

THE FOOD AND DRUGS ACT.

Circulars by the Board of Agriculture.

(Continued from page 596.)

CIRCULAR TO CLERKS TO LOCAL AUTHORITIES IN GREAT BRITAIN.

Penalties.

Section 17 of the new Act deals with penalties and is important. It is as follows:

"17.—(1) Where under any provision of the Sale of Food and Drugs Act, 1875, a person guilty of an offence is liable to a fine which may extend to twenty pounds as a maximum, he shall be liable for a second offence under the same provision to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds."

"(2) Where, under any provision of the Sale of Food and Drugs Act, a person guilty of an offence, is liable to a fine exceeding fifty pounds, and the offence in the opinion of the Court, was committed by the personal act, default, or culpable negligence of the person accused, that person shall be liable (if the court is of opinion that a fine will not meet the circumstances of the case) to imprisonment, with or without hard labour, for a period not exceeding three months."

Sub-section (1) of the above section appears to apply to offences under sections 6, 7, and 9 of the Act of 1875, and offences under the second and fourth paragraphs of section 27 of the same Act. (The third paragraph of section 27 is repealed by the new Act and replaced by section 20 [6] thereof.)

Sub-section (2) appears to apply to third and subsequent offences under the above-mentioned provisions of the Act of 1875 (as amended by sub-section [1] of section 17 of the new Act), and also to third and subsequent offences under the Margarine Act, 1887 (as extended by sections 5 and 6 of the new Act) or under sections 1, 8, 16, and 20 (6) of the new Act.

Procedure.

Section 19 of the new Act deals with procedure and replaces (with some modifications) section 10 of the Sale of Food and Drugs Act Amendment Act, 1879, which section is repealed by the present Act.

It is as follows:—

"19.—(1) When any article of food or drug has been purchased from any person for test purposes, any prosecution under the Sale of Food and Drugs Acts in respect of the sale thereof, notwithstanding anything contained in

section 20 of the Sale of Food and Drugs Act, 1875, shall not be instituted after the expiration of twenty-eight days from the time of the purchase.

"(2) In any prosecution under the Sale of Food and Drugs Acts the summons shall state particulars of the offence or offences alleged, and also the name of the prosecutor, and shall not be made returnable in less time than fourteen days from the day on which it is served, and there must be served therewith a copy of any analyst's certificate obtained on behalf of the prosecutor.

It is to be observed that sub-section (1) of the above section applies only to prosecutions in respect of sales; it does not apply, *e.g.*, to prosecutions for the giving of a false warranty (see *Cook v. White* [1896] 1 Q.B. 284; 65 L.J.M.C. 46, where this point was decided with reference to Section 10 of the Act of 1879). It is to be noted also that the sub-section is not limited (as was section 10 of the Act of 1879) to perishable articles.

In sub-section (2), which applies to all prosecutions under the Sale of Food and Drugs Acts, the extension to fourteen days of the period of seven days specified in section 10 of the Act of 1879 for the return of the summons should be noted, and also the provision as to service of a copy of the analyst's certificate.

Use of Warranty or Invoice as a Defence.

The important provisions, embodied in section 20 of the new Act, relating to the use of a warranty or invoice as a defence, call for particular attention, and should be read in conjunction with section 25 of the Sale of Food and Drugs Act, 1875, and section 7 of the Margarine Act, 1887.

Section 20 (1) provides that a warranty or invoice shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts unless the defendant has, within seven days after service of the summons, sent to the purchaser a copy of such warranty or invoice with a written notice stating that he intends to rely on the warranty or invoice, and specifying the name and address of the person from whom he received it, and has also sent a like notice of his intention to such person.

The person by whom such warranty or invoice is alleged to have been given is entitled to appear at the hearing and to give evidence, and the court may, if it thinks fit, adjourn the hearing to enable him to do so. [Section 20 (2)]

A warranty or invoice given by a person resident outside the United Kingdom will not be available as a defence, unless the defendant proves that he had taken reasonable steps to ascertain, and did in fact believe in, the accuracy of the statement contained in the warranty or invoice. [Section 20 (3).]

Where the defendant is a servant of the person who purchased the article under a warranty or invoice, he is, subject to the provisions of Section 20 (1) of the new Act, entitled to rely on Section 25 of the Sale of Food and Drugs Act, 1875, and Section 7 of the Margarine Act, 1887, provided that he further proves that he had no reason to believe that the article was otherwise than that demanded by the prosecutor. [Section 20 (4).]

It should be noted that the word "invoice" is introduced in these provisions with reference to cases to which section 7 of the Margarine Act, 1887, applies, and that the new Act does not make a mere invoice available by way of defence in any other case.

Proceedings for False Warranty.

Prosecutions for the giving of false warranties will probably be facilitated by the provision that, where the defendant in a prosecution under the Sale of Food and Drugs Acts has been discharged under the provisions of section 25 of the Sale of Food and Drugs Act, 1875, as amended by the new Act, any proceedings under the Sale of Food and Drugs Acts for giving the warranty relied on by the defendant in such prosecution, may be taken as

well before a court having jurisdiction in the place where the article of food or drug to which the warranty relates was purchased for analysis as before a court having jurisdiction in the place where the warranty was given. [Section 20 (5).]

It is to be observed that this provision applies only where the seller of the article has been prosecuted and been discharged as above mentioned.

Every person who, in respect of an article of food or drug sold by him as principal or agent, gives to the purchaser a false warranty in writing is liable on summary conviction, for the first, second, and subsequent offences, to fines not exceeding twenty pounds, fifty pounds, and one hundred pounds respectively, unless he proves to the satisfaction of the court that when he gave the warranty he had reason to believe that the statements or descriptions contained therein were true. [Section 20 (6)]

This modifies the law as laid down in the case of *Derbyshire v. Houlston* (1897) 1 Q.B. 772; 66 L.J.Q.B. 569, where it was held, under section 27 of the Act of 1875, that it was necessary for the prosecution to prove that the defendant knew or had reason to believe that the warranty was false.

Reference to Government Analyst.

Section 21 of the new Act modifies section 22 of the Sale of Food and Drugs Act, 1875, by providing that, on the request of either party, the justices or court shall cause an article of food or drug to be sent to the Commissioners of Inland Revenue for analysis, and may, if they think fit, do so without any such regard.

Production by Defendant of Analyst's Certificate.

Section 22 of the new Act is an extension of section 21 of the Sale of Food and Drugs Act, 1875, and makes the production by the defendant of a certificate of analysis by a public analyst in the prescribed form sufficient evidence of the facts therein stated, unless the prosecutor requires that the analyst be called as a witness.

A copy of every such certificate must, however, be sent to the prosecutor at least three clear days before the return day, and if it be not so sent the court may, if it thinks fit, adjourn the hearing on such terms as may seem proper. Section 22 (2).]

Definition of "Food."

The new Act provides (section 26) that for the purposes of the Sale of Food and Drugs Act the expression "food" shall include every article used for food or drink by man other than drugs or water, and any article which ordinarily enters into or is used in the composition or preparation of human food; and shall also include flavouring matters and condiments.

The Board would be glad if you would take steps to bring before your local authority the foregoing summary of the provisions of sections 9 to 22 of the Act, and they will be glad to forward you additional copies of this circular for distribution amongst the members of your local authority and the officers concerned, upon being informed of the number you require.

CONSUMPTION IN CATTLE AND HUMAN BEINGS IDENTICAL.

At a meeting held at Westow, near York, on Thursday last the Rev. F. Lawrence, Vicar, presiding, Colonel Steel of the Yorkshire College, Leeds, delivered a lecture under the auspices of the County Council on "Veterinary Hygiene," in the course of which he said that tuberculin had proved in ninety five per cent. of cases to be a safe and trustworthy test. At the close a resolution was passed unanimously, on the motion of Mr. John G. Middleton, assistant secretary of the Church Sanitary Association, seconded by Mr. W. Ripley, to the effect that the Government be asked to give compensation for the carcasses condemned by the authorities as affected with tuberculosis, and that only duly-qualified meat inspectors be appointed.

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OFFICIAL ADVERTISEMENT.

BOROUGH OF TIVERTON.

APPOINTMENT OF PUBLIC ANALYST.

The TOWN COUNCIL will, at their MEETING to be held on the EIGHTH DAY OF JANUARY next, proceed to elect a PUBLIC ANALYST for the Borough.

Candidates must be duly qualified according to the regulations of the Local Government Board, subject to whose approval the appointment will be made, and are requested to send their applications stating qualifications to the undersigned and endorsed "Borough Analyst" on or before the SIXTH DAY OF JANUARY next.

The Salary and Conditions of appointment may be known on application.

By Order,

C. M. HOLE, *Town Clerk.*

Tiverton, 14th December, 1899.

NOTICE TO READERS.

FOOD AND SANITATION will be forwarded post free at the following rates:

Three months	1/8.
Six	"	...	3/3.
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Bound volumes of Vol. I., II., III., V., and VI., may be obtained from E. W. ALLEN, 4, Ave Maria-lane, Paternoster-row, London, E.C. Price 5/- each.

Binding Cases for FOOD AND SANITATION, in cloth, gold lettered, may now be obtained from E. W. ALLEN, 4, Ave Maria-lane, London, E.C. Price 1s. 6d. each.

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SATURDAY, DECEMBER 23, 1899.

OYSTERS AND DISEASE.

Crushing and Contemptuous Exposure of the Attacks Upon the Oyster Trade.

A REPORT by Professors Herdman and Boyce recently issued demonstrates the absurdity of the action of some Medical Officers of Health who have gone out of their way to injure the oyster trade by issuing official warnings against the use of oysters and other shell fish. These scientists state that although they have never detected the *Bacillus typhosus* in any oysters obtained from the sea or from the markets, yet in experimentally infected oysters the organism could be recovered from the body of the oyster up to the tenth day, pointing to the possibility of the transmission of enteric fever by oysters. This is the sort of scientific opinion that invites a little calm consideration. First, Professors Herdman and Boyce doubtless unintentionally give the whole case against oysters away. They have "never detected the *Bacillus typhosus* in any oysters obtained either from the sea or bought in the markets," but the sapient professors hasten to whittle away any justice this truth might do to oyster dealers, to Whitstable, Colchester, Caen, etc., by the profound observation that it is possible to infect oysters and such oysters would transmit typhoid. We have heard of some old women who believe it is possible for the sky to fall and that they could then catch larks. It is the truth that is possible to transmit typhoid by many foods and drinks, and if the Medical Officers of Health who have issued the warnings against oysters had any sense of humour or logical appreciation they would begin by warning the public against the use of milk because whilst there does not exist one really proved case of typhoid from oyster eating there are hundreds proved due to the use of milk. Glasgow recently had 51 cases of enteric fever caused by milk. But these medical officers who are the victims of "oyster-mania" do not issue solemn warnings against the use of that proved far more dangerous food-milk. They do not deem it necessary to issue posters at the public expense pointing out the dangers of drinking water, although every sanitary authority knows well that the water supply of London is only semi-filtered sewage and drainage in which micro-organisms larger than the typhoid or cholera bacillus, indicative of sewage pollution are commonly present. Why with the Worthing and other awful examples before us not warn the consumer of water of the awful risks he runs? The answer is a simple one—because the Medical Officer who issued such silly posters would expose himself as a well-meaning but fussy fool devoid of the qualities necessary for administrative health work. We think in the light of these facts it is time the Health Committee of the authorities whose Medical Officers have issued oyster warnings should intervene and prohibit any further expenditure of money to injure a legitimate and a proved wholesome food industry.

SPURIOUS "HOVIS" BREAD.

At Vernon Street, West Kensington, Police Court, before Stipendary Mr. Rose, J. J. Fryer, 601, King's Road, Fulham, pleaded guilty to a charge of infringement of the Hovis Bread Flour Co.'s trade mark, "Hovis," which had been falsely applied by him to ordinary brown bread. Mr. Coleman, of Messrs. Granville, Smith and Co., solicitors, Leadenhall Street, represented the plaintiff company, and, in opening the case, explained that on four occasions bread of this character had been supplied, and that the prosecution was intended to protect the interest of the shareholders in the "Hovis" Company, and also to act as a warning to other bakers dishonestly inclined. He pointed out that the penalty for each of the offences committed by the defendant was, on summary conviction, imprisonment with or without hard labour for a term not exceeding four months, or to a fine not exceeding £20; but that he did not in this case ask for such a penalty to be inflicted, but would leave it to the Stipendiary to fine as he considered the case deserved. He asked, however, that some allowance towards the costs might be made, explaining that these prosecutions were a very heavy expense to the company, and that although numerous such proceedings had been instituted in the past, they had not had the desired result of putting a stop to the malpractices. The Stipendiary commented very severely upon the conduct of the defendant, and stated that had he been in a large way of business he would have inflicted the extreme penalty the law allowed. As it was, he must pay a fine of £1 on each of the four summonses and £4 costs, £8 in all.

UNLABELLED POISONS.

At Goole County Court, before Judge Raikes, the Pharmaceutical Society of Great Britain sued a Goole grocer, Herbert Hare, to recover two penalties of £5 each, for selling laudanum by retail contrary to the provisions of the Pharmacy Act, 1868. Mr. Grey, barrister, London, was for the plaintiffs, and Mr. Burniston defended. The facts were admitted, the defendant having sold laudanum without a label in bottles. His Honour found for the plaintiffs and awarded them the full penalties of £5 in each case.

GLUCOSE AND GOLDEN SYRUP.

At Bristol, Ernest Morris, grocer, 379, Gloucester Road, was summoned for selling golden syrup which was not of the nature, substance, and quality demanded. Mr. Sibley prosecuted, and Mr. J. Inskip (solicitor to the Bristol and District Grocers' Association) appeared for the defendant. Mr. Sibley stated that this was the first case of the kind in Bristol, and it was taken under section 6 of the Act, which provided that no person should sell any article or any drug which was not of the substance, nature, and quality asked for. Inspector Simpson called at the defendant's shop and asked for a pound of golden syrup, and a tin with "Golden Syrup" printed on the outside was given to him. The city analyst certified that it contained 100 per cent. of glucose. It was entirely different in substance from golden syrup. At that time golden syrup was quoted at 11s. to 14s. per cwt., and glucose from 8s. to 8s. 6d., and there they found the motive for palming off this stuff for golden syrup. It was not only a fraud upon the purchaser, but it was more than that—it was a dealing not fair to honest tradesmen. Mr. Inskip said his client bought the golden syrup at 18s. per cwt. Glucose must be mixed with golden syrup to prevent crystallization, and manufacturers were now issuing to customers distinct statements to this effect. The tins of golden syrup had been obtained from a highly respectable firm in Bristol, and he was assured by them that it was commercially known as golden syrup, and had been sold as such for a long time. The Bench adjourned the case.

THE hearing of the case was resumed at the Bristol Police Court on December 12th, before Mr. Edward Robinson and Mr. W. A. Latham. Mr. Sibley again prosecuted, and Mr. Inskip defended. Mr. Sibley said that Mr. Inskip had intimated that if the prosecution did not ask for a heavy penalty he would advise his client to plead guilty to a technical offence. It was the first case of the kind in Bristol. Mr. Simpson, the Inspector under the Act, purchased on October 31st, from the defendant a 1-lb. tin of "golden syrup." It was analysed and found to contain 100 per cent. of glucose. Formal evidence having been given by the Inspector, Fredk. Wallace Stoddart, the City Analyst, proved that the sample consisted of glucose syrup. Golden syrup was made from cane sugar, but often contained 15 per cent. to 20 per cent. of glucose. Glucose was made from maize, and was comparatively devoid of sweetness, and possessed many fundamental differences from golden syrup. In answer to Mr. Inskip the Court said that the question of difference between golden syrup and glucose from a Food and Drugs Act standpoint was not raised till early this year. The defendant gave evidence and said he bought the tins in January last and sold them in perfect good faith. He believed there was no difference in the price of golden syrup and glucose syrup. Mr. Sibley quoted prices to show that glucose was 8s. 9d. to 9s. a cwt., and golden syrup 12s. to 15s. Mr. Inskip urged that this was "glucose," and not "glucose syrup," and said that the biggest firm in Liverpool had offered to supply golden syrup for the same price as glucose syrup. He went on to say that the defendant was not in a position to go into scientific inquiries. He was only anxious to protect his character. He acted in good faith. The magistrates felt that they must convict. There was no doubt the inspector asked for golden syrup and received glucose syrup. They were glad, however, to be able to say that they believed he acted in good faith. They would inflict a fine of £2 and £3 costs.

MARGARINE PROSECUTIONS.

In the Aberdeen Sheriff Court on December 13th, before Sheriff Burnet, Charles Robertson, grocer, was fined 21s. 6d., with the option of three days' imprisonment, for having sold 11lb. of margarine wrapped up in plain paper without the word "margarine" marked upon it.

At Lambeth on December 15th, Henry Brooker, of East Street, Walworth, was summoned by the Newington Vestry for selling as butter a mixture which was found, upon analysis by the public analyst, to contain 92 per cent. of margarine. Evidence was given in support of the summons to the effect that the article was brought by a boy named Axten, who was employed for the purpose by Inspector Danson, as shilling butter. It was served in a margarine wrapper. The defendant said the boy did not ask for shilling butter, but simply for "shilling." He asked the boy whether he wanted "shilling mixture." The boy made no reply. He served the boy with the mixture in a margarine paper. Mr. Francis ordered the defendant to pay a fine of 20s. and 14s. 6d. costs.

RESURRECTING BAD BEEF AT BUCKIE.

Sensational Discovery.

A most extraordinary development has taken place in connection with a recent Buckie bad beef prosecution. On December 11th, the magistrates issued a warrant for the apprehension of Robert Johnstone, butcher, who was given seven days in which to pay his fine and expenses, amounting to £7 12s. The fine was not paid. The extraordinary thing, however, is that it has been discovered that five of the six sides of beef which were buried in the burgh dung depot have been resurrected, and the presumption is that they have been sold for human food, as it was contended by the defence that they were fit for that purpose. The burial of the beef was carried out about two o'clock in the

morning by the sanitary inspector, whose operations had been watched. The affair has caused a sensation in the town.

THE NEW FOOD AND DRUGS ACT.

By F. W. BECK, Esq., Solicitor to the Grocers' Federation.

THE new "Sale of Food and Drugs Act," which comes into operation on 1st January next, cannot be considered an entirely satisfactory measure from a trade point of view, inasmuch as it omits two most important amendments which were agitated for and strongly desired by all those who had practical experience of the working of the older Acts; and until provision is made for relieving the employer from liability in cases where the offence is caused by the unauthorised acts of an assistant, and until an invoice is in all cases made a sufficient warranty, the trade should continue its efforts to obtain further amendments. The Act, nevertheless, contains much that is useful and beneficial, while it imposes very few additional restrictions upon the sale of food. It is proposed to deal very briefly with (1) the amendments which are favourable and beneficial to the trade, (2) the new powers given to the authorities in administering the Act, (3) the new regulations as to proceedings, (4) the new obligations cast upon retailers. Among

THE USUAL AMENDMENTS

may be mentioned:—(1) That in all cases proceedings must be taken within 28 days from the date of purchase. Under the old Act this time limit applied only in cases of perishable articles, and it not infrequently happened with regard to the samples purchased by inspectors that the seller was left in doubt as to whether a prosecution would follow, while in some cases proceedings were delayed for several months, and the seller thereby prejudiced in his defence. (2) The summons must in every case give full particulars of the alleged offence, and must be accompanied by a copy of the analyst's certificate; a very desirable amendment, which will always enable a defendant to know the precise nature of the charge he has to meet. (3) In future inspectors must in every case divide the sample into three parts. Under the former Act it was only requisite to offer to divide, and provision was made for cases where the defendant did not accept the offer. (4) In every case a Court is bound, on the request of either party, to send the third sample to the Government Laboratory. This was formerly left entirely in the discretion of the Court, and in many cases Courts required direct evidence to be given by the defendant that there was a dispute about the analysis before referring the sample, and this entailed a very serious expense, which was seldom recovered from the prosecution, no matter what the ultimate result of the case. A still further amendment in the same direction is the making of a certificate by a public analyst evidence on behalf of a defendant. It will be remembered that the certificate of the analyst for the prosecution is made evidence unless the defendant requires that the analyst shall be personally called, whereas on the part of the defendant it has been necessary to obtain the personal attendance of the analyst in Court at a very considerable cost. By the new Act the prosecution and the defence will be put upon precisely the same footing, inasmuch as the defendant, having given notice of his intention to use an analyst's certificate, the prosecution may require that he shall call the analyst in person. (5) A vendor cannot in future be compelled to break open and sell from labelled tins or packets. This, again, will be of considerable service, as cases have arisen in which inspectors, on being offered a labelled tin of coffee or mustard, or labelled packet of cocoa, have asked to have "loose coffee," mustard, or cocoa, and the unwary seller, serving from the tin or packet, and neglecting to use a wrapper with notice upon it, has been led into committing an offence against the 1875 Act. Among

THE NEW POWERS GIVEN TO THE AUTHORITIES

are included:—(1) A very important provision that margarine, margarine-cheese, and butter may be sampled by the Commissioners of Customs at the port of entry, and if proved to be adulterated, or improperly consigned, proceedings may be taken against the importer, and, although these powers are now limited to agricultural products, they may by order in council be extended to any article of food. If proper effect be given to this section, the retail trade will be protected from being made the distributors of food, which they had no knowledge had been adulterated, and for which in many cases in the past they have been made the scape goats. (2) Power is given to the Local Government Board and Board of Agriculture to compel the efficient carrying out of the new Acts by local authorities, and where the local authorities have administered the Acts unequally or inadequately, the Central Boards may themselves take samples and institute proceedings. This also may be welcomed by the bulk of the trade, whose only desire is to see the Acts equitably and fairly enforced. (3) The Board of Agriculture are given power to set up presumptive standards as to the purity of milk, cream, butter, or cheese, and this also is certainly a step in the right direction. The question as to the amount of fat in pure butter, or as to the quantity of water to be permitted, or as to the use of preservatives, had hitherto been a matter of very great uncertainty, with regard to which every analyst had, and acted upon, his own views. It will be beneficial to have a standard set up by authority which will be generally accepted as binding throughout the country. Immediate effect is likely to be given to this, as a Departmental Committee has been appointed, and has already taken evidence, upon the subject of preservatives. It must be remembered, however, that any standard fixed by regulations of the Board of Agriculture are only presumptive standards, that is to say, they are to be effective only until they are proved to be wrong, and therefore in some cases it will be still left open to manufacturers to raise the question in Court as to the accuracy of the standard prescribed. (5) The new Act also gives powers to inspectors under certain conditions to take

SAMPLES IN COURSE OF DELIVERY.

This power previously existed only with regard to milk, and it was frequently exercised by the taking of samples at railway stations before the milk reached the hand of the retailer, resulting, in many instances, in the conviction of the person really responsible for the adulteration. It was proposed in the first instance to give an unlimited power to take samples of all articles in course of delivery, but it was pointed out that such power might become an instrument of oppression and great annoyance to the family grocer, whose delivery cart might be stopped, and the goods in the cart in the course of delivery to customers intercepted without any reasonable cause, and accordingly a provision was made that no samples shall be taken under this section except at the request of or with the consent of the purchaser or consignee. It will be seen that there are two ways in which this section will be capable of very useful enforcement—(a) The retail customer, suspecting that a shopkeeper is supplying adulterated articles, may order the goods to be delivered, and so arrange that the local inspector may meet the goods on delivery, and take samples. The section is not likely to be largely enforced in this direction; but in view of its possibilities a vendor should be careful that ordered goods are properly labelled and correctly described in the invoice. (b) The retail trader who has been supplied with an adulterated article by a wholesale house, might usefully enforce this provision by ordering a fresh supply of the same class of goods, and arrange with the inspector to sample them at the railway station or at the moment of delivery, thus enabling the inspector to proceed against the wholesaler or manufacturer. This might be the means of putting a check upon certain firms who are known to be guilty of adulteration, and who have in the past exposed the retail trader to prosecutions.

REGULATIONS AS TO PROCEEDINGS: THE IMPRISONMENT CLAUSE.

Some of the new regulations as to proceedings have been already mentioned, including that as to the time limit for instituting a prosecution, the particulars of the offence to be stated upon the summons, and the obligation upon the Court to refer the third sample to the Government Laboratory at the request of either party to the action. But a further and important alteration with regard to proceedings is contained in the provision that for a third or subsequent offence either under the Food and Drugs Act, or under the Margarine Act, a defendant may be committed to prison for a period not exceeding three months; but this applies only in cases where "in the opinion of the Court the offence was committed by the personal act, default, or culpable negligence of the defendant, and where the Court is of the opinion that a fine will not meet the justice of the case." The Select Committee, in recommending imprisonment as part of the penalties of the Act, made that recommendation conditionally upon the assistant being made responsible in place of the employer where he (the assistant) was the actual offender, but this condition has not been recognised in the new Act, and it appears somewhat of a hardship that if two technical offences are committed, or if two offences which are actually offences of an assistant are committed, the employer may in the event of a third conviction be sent to prison without the option of a fine. This clause involving, as it does, so serious a peril to the trade, affords a very strong argument in favour of the contention that the assistant should be made responsible where he is the actual offender.

NEW DEFINITION OF FOOD.

The Act also contains a new definition of food, framed with the intention of including certain articles which have been held to be outside the operation of the Act. Under the 1875 Act it had been held that baking powder and egg powder were not food within the meaning of that Act. The new definition includes "every article used for food or drink by man other than drugs or water, and any article which ordinarily enters into or is used in the composition or preparation of human food, and also includes the flavouring matter or condiments," and it is evident that this definition is sufficiently wide to include both baking powder and egg powder.

FRESH OBLIGATIONS UPON TRADERS.

The new Act contains only four points with regard to which the trade will need in any way to alter its methods. (1) Filled cheese must in future be sold as "margarine-cheese," and must be dealt with in precisely the same way as margarine. That is to say, the boxes in which it is consigned or stored must be branded "margarine-cheese." Filled cheese, when it is exposed for sale, must be labelled "margarine-cheese" in letters $1\frac{1}{2}$ inches long, and the wrapper in which the cheese is delivered to the customer must be marked "margarine-cheese" in letters half-inch long. It seems extremely likely that this provision will have the effect of entirely stopping the sale of "filled cheese," and it is understood that this will not be an entirely undesirable consummation. (2) Margarine wrappers must in future bear the words "margarine" in letters half-an-inch long, instead of quarter-of-an-inch as hitherto, and no printed matter of any kind must appear upon the wrapper, this alteration being made in consequence of the practice of using labels bearing advertisements of other articles, and sometimes in such a form as to obscure the word "margarine." Another most important alteration is made with regard to the manufacture of margarine, which is likely to have a far reaching effect upon the trade. By section 8 of the new Act it is made unlawful "to manufacture or sell any margarine, the fat of which contains more than 10 per cent. of butter fat." The object of this provision is apparently to make a broad dividing line between butter and margarine, and to stop the sale of all the higher class mixtures. A part of the process of the manufacture of margarine consists in churning it with

milk, and in this process margarine absorbs butter fat to the extent of about five or six per cent. The difference of four per cent. allowed by the new Act is probably only a precautionary margin, and the intention of the section evidently is to entirely prohibit the addition of any butter to margarine. The importance of this provision cannot be too strongly pressed, as it will probably be found in practice that if a larger proportion of fat is found in a sample of margarine it will give rise to the presumption that there has been deliberate adulteration with a view to passing off the article as butter, and any such case would be likely to meet with severe treatment. With regard to the packing and storing of margarine in bulk it is provided that the word "margarine" shall be branded upon the package itself, and not merely upon a label attached thereto. This will put a stop to the use of metal tickets upon baskets of margarine. (3) Condensed skimmed or separated milks must bear a label clearly visible to the purchaser, on which the words "machine skimmed milk" are printed, and these labels must take the place of the old labels on which the article was described as skimmed or separated milk. Although labelling is almost always undertaken by the manufacturer it will be well to bear this proviso in mind, and if any old stock remains at the end of the year to obtain from the manufacturer the new labels for it. (4) A new provision is also made with reference to the wrappers bearing notice of mixture, and it is provided that such notice shall not be effective if the notice of mixture is obscured by other matter on the label. This is not an important alteration, and is not likely to make much difference in the mode in which the Act of 1875 has been interpreted, but it is clearly not desirable that labels notifying mixtures should contain a mass of other printed matter. By far the better course is to print nothing else upon the wrapper than the name of the mixture and the name and address of the seller. These are the only additional obligations cast upon the retailer by the Act, and it cannot be said that they are particularly onerous, whilst the benefits flowing from the Act clearly out-weigh its additional requirements. The most important alteration involved will be in the mode of manufacturing and selling margarine, and it certainly appears likely that the prohibition of mixtures will make almost a complete revolution in the trade to margarine.

THE WARRANTY QUESTION.

Perhaps the most disappointing feature of the whole Act is the way in which the warranty question is dealt with. It had for years been contended that an invoice describing goods should be a warranty to the retailer, and, as this principle had been accepted in the Margarine Act, it was reasonably anticipated that it would be extended to all other articles. The retailer has to warrant all his goods by description. If he is asked for coffee, cocoa, butter or mustard, he is expected to sell the pure article, unless he gives notice to the contrary. The customer is not required to put the prefix "pure" or "unadulterated" before his request for goods; and if the retailer sells a mixed or adulterated article, he becomes liable to penalties. In this way he gives an implied guarantee as to the purity of every article he sells. Why should not the wholesaler be in the same position? Why should not an invoice describing the article as coffee, cocoa, pepper, mustard, or vinegar mean that the goods are pure unless the contrary is stated upon the invoice? This view was adopted by the Select Committee in their recommendations; it was after much discussion accepted by the Grand Committee which considered the Bill; but when the subject came before the House of Commons the proposal to make an invoice a warranty was practically dropped by the Government. From discussions which have taken place in various associations, it appears that there is some little misapprehension with regard to the present position, and it has been suggested that from the wording of Section 20 of the new Act it may be held that an invoice is a warranty. It is well that there should be no doubt as to the real meaning of the Act, and at the risk of appearing technical

let us see exactly how the matter stands. Section 20 is imposing conditions upon the use of warranties of every description, and it opens by saying, "A warranty or invoice shall not be available as a defence to any proceedings under the Sale of Food and Drugs Acts," unless the defendant has done certain things. The phrase, "Sale of Food and Drugs Acts," here includes the Margarine Act, as it is provided by the last section of the Act that the Acts of 1875, 1879, 1899, and the Margarine Act, 1887, may be cited collectively, and are referred to in the Act as the "Sale of Food and Drugs Acts." Under the Margarine Act an invoice is a warranty, and, therefore, Section 20, which is dealing with the use of all kinds of warranties, uses the words "warranty or invoice," because the Margarine Act is included in the provision. Let there be no misunderstanding about the matter.

THE NEW ACT IN NO WAY EXTENDS THE USE OF WARRANTIES.

On the contrary, it makes the defence of all classes of warranties subject to new conditions, namely:—(1) Within seven days after service of his summons the defendant must send a written notice to the prosecutor with a copy of the warranty, and the name and address of the giver of it. (2) The giver of the warranty has the right to appear at the hearing and give evidence. (3) A warranty given by a person living out of the United Kingdom is not to be available, unless the defendant proves that he took reasonable steps to ascertain the truth of the warranty. The decisions as to what is and what is not a warranty have been many and conflicting, and it is evident that the only safe course is to insist upon having an express warranty in every case where there is any possible doubt as to the purity of the goods. This should be upon contract note, invoice and delivery note. Where only one article is included it will be sufficient if the words "guaranteed pure" are added. If several articles are included in the same document the words "all goods included in this invoice are guaranteed pure" should be used. In invoices of butter the word "butter" should always appear. It is a prevalent custom to use merely words such as "Danish," "Dutch," or the name of a brand, and this is not sufficient to be a protection, even under the Margarine Act. In purchase, of butter it is absolutely necessary to have an express warranty, notwithstanding that the Margarine Act provides for an invoice being a warranty, as in almost all cases inspectors bring their prosecutions for adulterated butter under the Food and Drugs Act as well as the Margarine Act, usually issuing a summons under each Act, and sometimes, improperly it is thought, obtaining a conviction under both. This mode of proceeding is adopted for the express purpose of shutting out a defendant from setting up the responsibility of his assistant or the defence of an invoice, and as the summons under the Food and Drugs Act is usually taken first an invoice is of no effect. This suggests

ANOTHER AMENDMENT WHICH IS STILL REQUIRED

in the Act. The Margarine Act was passed for the express purpose of providing regulations for the sale of butter substitutes, and if these regulations as now amended are legally complied with, a vendor should be safe from prosecution; in other words, all proceedings with regard to butter should be taken under the Margarine Act, and not under the Food and Drugs Act. Several matters of detail other than those which have been mentioned are dealt with in the Act, and should be studied for himself by every careful retailer. The points mainly to be remembered are:—(1) That after 1st January next, margarine wrappers must bear the word in half-inch letters, instead of quarter-inch, and that no other matter must appear on the label. (2) That margarine cheese must be sold under the same conditions as margarine. (3) That mixture wrappers should bear nothing further than the notice, except the name and address of the seller. (4) That condensed separated milk must be labelled "machine skimmed milk." No opportunity should be missed of agitating for the three

additional amendments which have been already mentioned:—(1) Making an invoice a warranty. (2) Putting the responsibility upon the assistant when he is the guilty party. (3) Providing that all proceedings with regard to butter be under the Margarine Act. But meanwhile it must be conceded that the new Act, while imposing but slight additional burdens, is likely to be of real and substantial benefit to the trade.

THE CHAMBERS OF AGRICULTURE AND PRESERVATIVES.

LORD LONDONDERRY presided at the Society of Arts, W.C., over the annual meeting of the Central and Associated Chamber of Agriculture.

Mr. Kidner (Taunton) moved: "That this meeting is opposed to the employment of preservatives and colouring matters in articles of dairy produce, whether British or imported." He said agriculturists felt that their products, if properly produced, were capable of being placed before the consumer without preservatives at all. They believed that if consumers had their will in the matter they would prefer also that the article should be placed before them in that form.

Mr. Middleton (Cleveland, Yorks) seconded the motion.

Professor Long moved the following words as a rider to the motion, viz.: "And that it be an instruction to the witnesses appointed by the Chamber to urge that they are believed to be deleterious to the health of invalids and children, and their use should be prohibited." He thought they wanted to do more than enter a bare protest. They wanted to do something definite, because their witnesses going to the Committee must have something to say for the Chamber, and not merely for themselves. The Departmental Committee was not dealing solely with milk or butter, but with sausages and meat and jams, and so on, and therefore with all those things preserved a man might in the course of a day take a very considerable quantity of preservatives. By taking the line of allowing preservatives they would be placing a premium on bad workmanship. If they wanted to send good butter into the market they could do so by adopting the Danish method of pasteurisation.

Mr. Channing, M.P., seconded the rider to the resolution. He thought that was a question on which the interests of the English producer were absolutely identical with those of the consumer, and they could hardly realise the importance of such a pronouncement in such a body as theirs in the interest of all. Last Session he himself had no hesitation in voting for the prohibition of the colouring of margarine in spite of many of his friends saying he was a protectionist in disguise.

Mr. F. Horne contended that a certain quantity of preservatives was necessary in the case of milk sent to the metropolis in the summer. ("No, no.")

After further discussion the resolution and rider were adopted.

The meeting also adopted a resolution approving of the extension of the Workmen's Compensation Act to agricultural labourers.

AMERICAN AND IRISH HAMS.

At Dublin, before Mr. Mahony, the adjourned summons under the Merchandise Marks Act was heard against H. Williams and Co. (Limited), wholesale and retail grocers and provision merchants, having various branch houses in the city, for having in September last, at 89 and 90, Rathmines Road, Rathmines, Dublin, sold a ham to which a false trade description—namely, "Irish ham"—was applied. Mr. Tobias appeared for the prosecution (the

Bacon Curers Association of Great Britain and Ireland), and Mr. T. M. Healy, Q.C., M.P., represented the defendants. When the case was called Mr. Healy said they admitted the facts, and although he had a good technical defence he advise his clients to plead guilty. This case occurred on the day after that for which the defendants were fined on the previous Wednesday, but in a different house. The defendants deeply regretted the occurrence, and they had in both cases discharged the assistants who were guilty of selling the hams as Irish. Under these circumstances, and tendering as they did to the court and to the public the expression of their deep regret that such a thing should have taken place, he asked the magistrate to say that the fine imposed in the other case last week met the justice of the case. Nothing of the kind would occur again. It was done contrary to the instructions of the defendants' responsible manager. Mr. Tobias said he could not consent to the case being dealt with otherwise than in the strictest measure of the law. He could not see how the dismissal of the shopmen who carried out the policy of Messrs. Williams' establishment in any degree condoned for the double aspect of the fraud of these gentlemen, who were guilty of palming off American articles as Irish hams and bacon in several of their establishments in Dublin. The facts were that not alone was the ham sold to them as Irish, but in the window were twenty or thirty hams with a label stuck in the middle of them marked "Finest Irish," and not one of them was an Irish ham. The price of foreign bacon retail was 4½d. or 5d. per lb., and when that was sold as Irish at 8d. or 8½d. or 9d. a lb. he thought it was a gross fraud on the public, and was inflicting a grievous injury on this important Irish industry. He asked that the full penalty for a second conviction should be imposed in the case. The defendants were not only fined four years ago, but they were also fined the previous week. The magistrates had power to impose a term of imprisonment for the second offence. Mr. Healy said he should deprecate the excessive zeal of Mr. Tobias in stating that this sort of thing was the fixed policy of the defendants. That was not so; it was done contrary to special instructions. That statement would be far more injurious to the defendants in their trade than any fine the magistrate could impose. With regard to the fine four or five years ago he was instructed that it was not for the same class of offence at all, and Mr. Tobias was not warranted in stating that it was unless he could produce the record of the convictions. These two cases were listed for hearing last week. There was a conviction in one and an adjournment in the other. Were it not for that they would have been both determined at the same time, and accordingly he submitted that it was not the true meaning of the section of the Act to regard this as a second offence. Mr. Tobias said his remarks were drawn from him by the statement that the shopmen had been dismissed. If anyone believed that these assistants were telling lies and committing frauds without any possible advantage to themselves, and without the tacit sanction, if not the actual instructions, of the defendants, they would be very simple indeed. Mr. Williams, when in the witness chair during the hearing of the case last week, admitted that he was fined for a similar offence four or five years ago. It was a second conviction in fact, and a third one in merit. He would yield to the application to treat this summons and that heard last week as one case, but the offences were committed in two different branch establishments. The last case was for 47, Henry Street, and this was for the Rathmines branch. The Magistrate said he would deal with the case as a first offence. Every deference was to be made to the statement of Mr. Healy, and coming from a responsible legal gentleman like him he thought it made the fullest reparation possible to the law, and he would act upon it. He would fine the defendants £20. Mr. Tobias asked for £5 expenses. They were put to two guineas extra costs owing to the adjournment. Mr. Healy said the fine went to the prosecution, and they should not get costs. The magistrates declined to give costs.

THE MANUFACTURE OF CHEDDAR CHEESE.

THE conditions essential to the manufacture of Cheddar cheese of high quality form the subject of some interesting remarks in a report prepared for the Board of Agriculture by Mr. F. J. Lloyd, F.C.S., F.I.C., on the results of the investigations carried out by him during the past eight years in connection with the cheese schools of the Bath and West and Southern Counties Society. It appears that the methods of making Cheddar cheese differ in almost every locality in which it is made, but although the processes followed may present considerable differences, the final results obtained are practically identical to the extent that the article produced in Cheddar cheese or cheese of the Cheddar type. In certain points, however, the character of the cheese made varies according to the system of manufacture adopted, particularly with respect to the duration of the process of ripening, and to the texture and consistency of the finished product. Thus, formerly a Cheddar cheese was not considered fit for consumption until it had been kept for twelve months, but now a rapidly ripening cheese will be ready for market three months after it is made, while six months is a more common period. Hence the extreme methods have become known as "rapid" and "slow" ripening systems. Again, some methods offer greater facilities than others for the production of an article of uniform texture; and by some processes there is a tendency for the cheese to be hard, while by others a softer and mellow curd is obtained, which has an important bearing on the quality. Still, in flavour there is apparently not much variety due to the system of manufacture, and, after a careful investigation of the various methods, Mr. Lloyd is of opinion that as good a cheese can be made by any one of them as by any other. "As a rule," he says, "when a maker fails to make good cheese it is not the fault of the system, but is due to want of cleanliness or want of sufficient skill. Nothing is more disastrous than for a maker who has not met with success to alter his system or to take up another. The only course for him to pursue is first to discover, from those who possess experience of the system which he has adopted, in what respects he has failed to carry the system out properly, and then to remedy the defects."

The characteristics of a good Cheddar cheese are described as follows:—"A Cheddar cheese, when cut, should be soft and fat, neither hard nor crumbly. It should have both the aroma and flavour of a nut, the so-called 'nutty flavour' so much sought after. It should melt in the mouth, producing not only an agreeable flavour, but leaving a most pleasant after-taste. It should taste neither sweet nor acid." Among the conditions declared to be necessary for the production of cheese of this high quality, the first is the employment of perfectly clean milk of normal composition from healthy cows. The observance of this precaution as to the cleanliness and wholesomeness of the raw product is regarded as absolutely essential, for if it is neglected no skill or care will ensure success. Next in importance is the provision of a properly equipped dairy and cheese-room. The room should be so placed as to be free from unpleasant smells. "No cheese-maker," Mr. Lloyd says, "can ever hope to attain success unless a careful record of the work done daily is kept; and every cheese, before being taken to the curing-room, should have sewn on it a label showing the date of manufacture. Then, whether the cheese be good or bad, it will be possible to turn back to the record and discover the cause of this success or failure."

With reference to the duration of the curing period, cheese-makers are reminded that a cheese, when ripe, is at its best, and that from that time it begins to deteriorate. The warmer the room in which the cheese is kept, the more rapid is both the ripening and the subsequent falling off. Hence it arises that cheese made late in the season keeps better and longer than that made early. The early-made cheese is ripening in a continually rising temperature; the process of ripening continually falling tempera-

ture, and therefore the process of ripening is week by week checked more and more. Consequently a cheese-room requires to be artificially heated in the autumn, or the cheeses will not properly ripen. The temperature of a cheese-ripening room should be about 65 deg. F. The only possible means of checking the ripening of a cheese beyond a desirable point is to place it at once in a low temperature, 40 deg. F. being recommended as a temperature which would agree with the dictates of science, though even at this low temperature certain changes may take place. In this connection it may be noted that if a cheese has been made from exceptionally pure milk, the changes which proceed in the cheese, after what may be termed complete ripeness has been reached, are such as will not materially injure the cheese, and they will proceed comparatively slowly. But if any taint was in the milk when the cheese was made, then the changes which take place after complete ripeness has been reached are more rapid and more destructive to the quality of the cheese.

MR. WATER LONG, M.P., ON ADULTERATION AND AGRICULTURISTS' GRIEVANCES.

SPEAKING at Edinboro' on December 14th, Mr. Walter Long, M.P., said he found a little difficulty in dealing with the subject of oatmeal because he thought there was a little misapprehension in the minds of some who talked about the subject in regard to the real meaning of the word "adulteration." It was not necessarily an act of adulteration to mix foreign oatmeal with Scotch oatmeal. The foreign oatmeal might be as good as the Scotch. He was not expressing an opinion; but if they were mixed, and the mixture was sold as best Scotch meal, the vendor was, under the Merchandise Marks Act, guilty of a fraud, and the Board of Agriculture had powers to prosecute when the aggrieved parties brought forward evidence. The Board were quite prepared to give their most favourable consideration to any evidence, brought before them which would justify their taking such proceedings. As to the question of the marking of foreign meat, he had a little grievance against the mover of the resolution, because he talked about the Government having for years ignored agricultural legislation, and pointed out that the Government had been legislating in various directions. In regard to the marking, he thought the difficulties were enormous. Unless they marked each mutton chop they would not effectively prevent the fraud that they were dealing with; and it was suggested that if marking was not feasible they should enforce the sale in separate places. Well, that was a question for the Board of Trade, and he thought they would say that that was an unnecessary interference with the general trader, and that if the trader sold foreign meat as home-grown he was guilty of a fraud, and that the law was sufficient to punish him. The proposed remedies had never appeared to be of a practical character. With respect to compensation for carcasses of apparently healthy animals, he said he was not prepared to accept the statement which had been made with regard to the successes that had resulted from operations in Denmark. What they wanted was not so much compensation for carcasses as a better and more uniform and a more intelligent system of meat inspection all over the country. (Applause.) He suggested as a great difficulty the question of whose pocket the compensation was to come out of. This, however, was a question for the Local Government Board, who, he thought, would give a similar answer to what he had given. With regard to the tests of seeds, he had had under consideration for a considerable time the desirability of some alteration, and he had been considering whether it would not be desirable to appoint a departmental committee to examine into the whole question, to report, and to make suggestions as to a proposed remedy. As to the statistical records of agricultural prices, it seemed to him that there was considerable room for improvement from the statistical point of view in the way in which those

prices were fixed. Referring to the system of fair rents, fixity of tenure, and free sale, which had been alluded to in the discussion, Mr. Long said it was inevitable that the result of that practice would be everywhere as it had been in Ireland, that the dual existence on the same spot of two different bodies with dual rights in the same property could not be continued. One must go. What did the extension of the landlord interest mean? It had meant in Ireland the alienation of the owner of the soil from the soil, the complete paralysis of all the machinery for improvement which existed in landowners holding capital and willing to expend it, and he was confident that while it was undoubtedly desirable to so alter the law as to facilitate the settlement of differences, to cheapen the procedure of settlement, and to make the relative position of landlord and tenant secure and satisfactory, any attempt to follow the example of the Irish land legislation in England, Scotland, and Wales would be fraught with the most disastrous consequences not only to the owner of the land but to the occupier and the labourer. So long as he was responsible for land legislation, so long as he had a voice or a vote, he would oppose with all his energy legislation of the kind proposed, because he believed it to be mischievous.

ADULTERATION OF FOOD IN ABERDEENSHIRE.

"Doctoring" Whisky.

MR. JAMES HENDRICK, county analyst, reports to the County Council on the samples submitted to him during the quarter ending 30th September. The Public Health Sub-Committee had authorised that one hundred samples of certain foods and drugs should be submitted for analysis, and of that number 96 had been submitted to him during the quarter. Of these he reported that 18—that was about 19 per cent—were adulterated. So far as figures showed, adulteration was about twice as prevalent in Aberdeenshire as on the average in England and Wales. The statistics of the Local Government Board showed that, with the more general administration of the Acts, adulteration had been steadily diminishing. On the other hand, in proportion as the administration of the Acts, was irregular, and the number of samples taken small, the percentage of adulteration, generally speaking, rose, and this seemed quite to explain what had been found in Aberdeenshire, where the Acts had hitherto been enforced to only a very slight extent. In an interesting table Mr. Hendrick shows that in the seven police divisions in Aberdeen, 33 samples of whisky were taken, of which 6 were found to be adulterated—4 in Inverurie, and 1 each in Huntly and Aberdeen. Peterhead, with 6 samples; Fraserburgh, with 4; Aboyne and Alford, with 3 each, had a clean bill. Of milk, 34 samples were taken, and 7 were found to be adulterated—1 out of 7 in Fraserburgh; 2 out of 6 in Aboyne (1 of them cream); 3 out of 12 in Aberdeen; and 1 out of 4 in Peterhead. Of 9 samples of butter, 1 in Fraserburgh, and 1 in Aboyne were found adulterated. Coffee and flour were free from adulteration, and 3 out of 5 samples of syrup were adulterated, these being found in Aberdeen. In all, out of 96 samples, 18 were found adulterated. With reference to whisky, the following remarks are made:—No virulent adulterant, such as common rumour believes to be largely used, and such as was found last year in a sample submitted privately by the police, was found in any sample of whisky. The samples condemned were diluted below the legal limit. The Act allows the very liberal dilution of 25 degrees under proof, but the samples condemned were diluted beyond that extent. All the samples condemned, besides being weak, contained over 100 grains of solid matter per gallon. One of them contained as much as 340 grains per gallon, and in some respects resembled rum rather than whisky. This solid matter was colouring and flavouring material, generally sugar and caramel, which had been added to the spirit. Besides those condemned, eight other samples also contained over 100 grains of solid matter per gallon. While these substances are not in

themselves harmful, they are, in my opinion, added to colour and flavour raw, unmaturing spirit. Genuine, properly matured whisky does not contain in itself more than a very small quantity of solid matter.

Of the 33 samples of milk and one of cream analysed, the analyst classes 1 (from Inverurie) as very good, 10 as good, 8 as fair, and 7 as poor. One of the adulterated samples from Fraserburgh contained boric acid. Mr. Hendrick adds—Samples are classed as good when they resemble in composition genuine milk of average quality. When they are considerably better than that I have classed them as very good. Fair samples are somewhat below the average, but would not be condemned by any recognised standard. Poor samples are those which, while they would not be condemned by what is known as the Somerset House standard, are, in my opinion, probably adulterated.

It is interesting to notice the difference between the milk obtained from different districts. Inverurie comes out very well. In Fraserburgh, too, there are no poor samples. The only sample condemned was itself of good quality, and was only condemned for containing boric acid. On the other hand, Aberdeen and Deeside came out very badly. In the Aberdeen district, of twelve samples only two were good, while seven were poor or adulterated. In the Aboyne district, of five samples not one was good—that is, not one was up to the quality of average milk. Thus it would appear that, while the herring fishers of Fraserburgh are supplied with milk of good quality, the evidence obtained does not indicate that the same can be said of milk supplied to the summer visitors to Deeside. It is a pity that we are not able to pursue this interesting comparison further by taking some samples in Braemar, and a greater number in Ballatar.

It is pleasant to note that one common form of milk adulteration appears to be very rare in Aberdeenshire. Though our samples were taken during the warmest weather of summer, in only one case was any preservative found in the milk. It cannot be too widely known that the use of antiseptic chemicals for preserving milk is not only unnecessary, but it is a most dangerous form of adulteration, and that just as in the case of other perishable foods, such as meat and fish, where chilling and ice are largely used, there are perfectly legitimate means of attaining this object. Unfortunately these chemical preservatives are largely advertised, usually under fancy names, with glowing testimonials, too often given by persons who should know better, and it is not to be wondered at that milksellers are often ignorantly allured into using them. In the Fraserburgh case, at the request of the procurator-fiscal, a sample of the preservative used was analysed. The effective antiseptic agent in it was boric acid. An equal quantity of this could have been purchased under its own name for about one-tenth of the price actually paid for it.

As to butter, the analyst remarks that one-third of the samples were not what they should have been, and some were of poor quality. All the samples of coffee and flour were genuine, and the three out of five samples of syrup contained a greater or less admixture of starch glucose.

A report is appended by Mr. Murison, the county clerk, showing how the twelve persons who were prosecuted were dealt with in court. These cases were reported at the time.

The committee, having considered the reports of the analyst and clerk, were of opinion that they fully justified the action of the council for enforcing the Acts. The following remarks are added:—The committee cannot refrain, however, from stating that, in their opinion, one or two of the most serious cases of adulteration have been very leniently dealt with by the court. They think that when aggravated cases, such as Nos. 6 and 12 on the list, are brought before the court, the offenders should be dealt with in an exemplary manner, not only for the protection of the purchasing public, but also in the interests of the honest

trader. There can further be no doubt that if such offenders were more severely dealt with by the court, it would very largely strengthen the position of the local authority in their endeavours to carry out the duties which have been imposed upon them by the Legislature. In conclusion, the committee state that they have also resolved to authorise the chief constable, in consultation with the analyst, to take during next year such samples of foods and drugs sold within the county as may be deemed necessary, on the understanding that if it is thought desirable to procure more than 100 of such samples they shall communicate with the chairman of the committee and the clerk before doing so.

The report is signed by Colonel F. N. Innes, of Learney as chairman.

ADULTERATED TEA AND THE CUSTOMS' BOARD.

THE allegation to the effect that a quarter of the caper teas and a half of the dust teas now imported into the United Kingdom ought to be confiscated under the Food and Drugs Act, 1875, by reason of their containing a large percentage of earthy matter and sand has had the attention of the Board of Customs who ordered a full inquiry to be made, with the object of ascertaining whether there was any need for altering the existing regulations or increasing the number of tea inspectors. Comparatively few irregularities have been discovered, though it has to be noted as a matter not very creditable to the authorities that the investigation has proved beyond doubt that parcels of tea rejected by the Hamburg and New York Customs have been passed by the English Customs and sold in London. What action the Customs' officials will take as a result of this discovery is not stated, but we may assume that they will, at least, arrange for a more rigid enforcement of the precautions for detecting adulteration.

THE USE OF SALT IN BUTTER.

MR. C. G. FREER-THONGER, the well-known dairy expert, writes in *Farm and Home*:—Nearly all butter sold in this country is salted, the quantity of salt added varying according to the different markets; the salt is added in the process of manufacture after the granular butter has been washed and drained, and before it is worked. The general practice as to the quantity of salt to be used is to add one ounce of salt for each pound of butter as it is placed on the worker. As the butter will contain varying amounts of water at this stage, according to the temperature of churning, the size of the butter granules, thoroughness of draining, &c., the salting, if done according to this rule, is apt to be uneven, more or less of the salt being lost through the working. Salt serves a three-fold purpose in butter-making. First, it causes the minute butter-milk drops to run together, thus making it possible to work a considerable amount of water out of the butter; second, it preserves the butter from early decay by checking germ growth therein for a time; and, third, it gives a distinct flavour to the butter which in most markets is considered desirable. It may be well to consider these points a little more in detail, and we will consider first the effect of salt on the water content of butter. Moisture is present in butter in the shape of an immense number of microscopic water or butter-milk drops. According to the water content, at least two types of butter may be traced; that having comparatively few and large drops, and that having a large number of comparatively small-sized drops. Butter of the former kind may not contain as much water per cent. as the latter kind, but on standing brine will leak out, and there will be a loss in weight. Such butter will give the impression of containing a great deal of water when cut or tried, while butter in which the water is found in an immense number of relatively small drops will appear very dry.

(To be continued next week).

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Food and Sanitation.

SATURDAY, DECEMBER 30, 1899.

MARGARINE PROSECUTIONS.

A case of considerable interest was heard before the Rochdale borough magistrates on December 20th, when John Holland, described as the "manager and owner" of the shop, 104, Yorkshire Street, Rochdale, were summoned for offences against the Food and Drugs Act and the Margarine Act. Four summonses had been issued against Holland at the instance of Mr. Thomas Whiteley, inspector under the Acts, and nuisance inspector for the borough of Rochdale. Defendant was summoned in the first two cases for selling 2lb. of butter to Mrs. Caroline Llewellyn "not of the nature, substance, and quality demanded of the article by the purchaser," and for selling margarine to Mrs. Tomlinson which was in a package not duly branded,

and durably marked "margarine," on the 27th October. The remaining summonses related to similar offences alleged to have been committed on November 2nd. The case was previously before the court on November 29th, when William Holland was summoned for the same offences. It was then proved, however, that William Holland had had no connection with the shop since last September, and the summonses against him were accordingly dismissed. Mr. James Leach, Town Clerk of Rochdale, appeared to prosecute, and Mr. Pigge defended. It was agreed to take first the case of selling butter "not of the nature," etc., demanded. In stating the facts of the case, Mr. Leach said that Mrs. Llewellyn purchased 2lbs. of butter for the defendant. It was found on analysis to be an ordinary margarine mixture. The penalty to which the defendant was liable was one not exceeding £20 and costs for a first offence, and this was a first offence. Mrs. Llewellyn, a married woman residing in Great George Street, Rochdale, said that on the 27th October, on the instructions of Mr. Whiteley, she went to the defendant's shop. She had often seen the defendant serving in the shop. She asked for 2lb. of "best butter," for which she paid 2s. She also purchased 1lb. of lard, 6d. of eggs, and some bacon. Defendant supplied her with the articles. As she was going out of the shop she met Mr. Whiteley and Mr. Lord, his assistant, and she went back to the counter with them, and pointed to the defendant as the man who had served her. Mr. Whiteley deposed that he gave the last witness instructions to purchase the articles she had named. When he went into the shop with the woman he told the defendant that the butter had been purchased for the purpose of being analysed. He asked the defendant if the shop belonged to the Irish Creamery Company. Defendant replied "No, I have received a letter from Liverpool this morning asking me to take down the banner," which had the name of that company upon it. Witness then said, "I suppose William Holland is the manager?" and defendant replied, "No; John Holland." In reply to further questions, defendant said that his name was John Holland, and that he was the owner of the shop. Continuing, witness said that he divided the butter into three portions, one of which he left with the defendant, another he sent to the borough analyst (Mr. Stenhouse), and the third he now produced. Mr. Stenhouse, in his report upon the analysis of the sample, stated: "It consists chiefly of animal fats not derived from milk or cream. It is an ordinary margarine mixture, and contains not more than 17 per cent. of real butter." Mr. Pigge (to witness): You have already proceeded against another person for these identical offences—these summonses were heard here a fortnight ago and were then dismissed? Witness: Yes. If you had got a conviction in those cases you would not have proceeded with these summonses to-day?—I don't think so. Mr. Leach: That is a matter he would have had to take my advice upon, and I have never considered it. Mr. Pigge (to witness): Did you proceed against the other man as being the owner of the premises? Witness: Yes. And you now proceed against my client as the owner?—Either as the owner or seller—it is immaterial. So long as you get a conviction?—Yes. John Ernest Lord, assistant inspector, corroborated the last witness's statement as to what transpired in the shop. For the defence, Mr. Pigge said it seemed to him that this prosecution was being proceeded with owing to the fact that the summonses which were before the magistrates a fortnight ago were dismissed. He thought that if a conviction had been obtained on the summonses then taken out the defendant would not have had to appear that day. Mr. Leach here interposed with the remark that it was the first time he had heard that the summonses were for the same offence as those before the court a fortnight ago. He was informed that these summonses were taken out before those heard previously. Continuing, Mr. Pigge said he would not endeavour to challenge the evidence which had been adduced. The only point he would put to their worships was this: That in this offence under the Food and Drugs Act the penalty was left entirely to the discretion of the

magistrates, and the maximum for the worst possible offence, in the case of a first offender, was not to exceed £20. This was the first time the defendant had been prosecuted for an offence under this Act. He asked them to deal with the case as a first offence, and inflict only a nominal penalty. The case would act as a warning to others whether the fine was a heavy one or a light one. The defendant was giving up the grocery business, so that there was not much chance of him being concerned in a similar charge again. This concluded the first case. The magistrates announced that they would postpone their decision until they had heard the whole of the evidence. Mr. Leach said he would now take the case in which the defendant was summoned for selling margarine in a wrapper which was not marked in accordance with the provisions of the Margarine Act on November 2nd. He would then be able to get a conviction under each Act on different dates. Under the circumstances he thought it would be advisable to waive the other summonses. Mr. Pigge intimated that his client pleaded guilty to this offence. Mrs. Caroline Tomlinson, of Dania Place, Drake Street, Rochdale, said that on November 2nd she visited the defendant's shop, having received instructions from Mr. Whiteley. She purchased 1½ lbs. of "best butter," ¼ lb. of tea, ½ lb. of cheese, and sixpennyworth of eggs. As she was leaving the shop she was met by Mr. Whiteley, who took the butter from her and went to the defendant. There was no mark on the paper in which the butter was wrapped. Mr. Whiteley stated that after receiving the butter from the last witness he told the defendant that it had been purchased for the purpose of being analysed. Witness produced the paper in which the article was wrapped; it contained no mark of any kind. Witness divided the butter in the customary manner. He forwarded a portion of it to the borough analyst, who reported that it consisted chiefly of animal fats not derived from milk or cream; that it could not contain more than 17 per cent. of real butter; and that it was a margarine mixture. In addressing the magistrates on behalf of the defendant, Mr. Pigge raised a technical objection to the proceedings in this case. Section 6 of the Margarine Act, which prescribed the penalty, stated that "Every person dealing in margarine in the manner described in the preceding section shall conform to the following regulations." Then followed the regulations, which included one ordering every package to be branded and durably marked "margarine." But "the preceding section" (section 5) related to another matter altogether. That section gave power for proceedings to be taken against an employee, where the offence was committed without the knowledge of the employer. But this case was being taken under section 4, which was not "the preceding" section to section 6. The question had occurred to him whether the magistrates had power to inflict any penalty. Of course, the objection was purely technical, but he was bound to urge it in the interests of his client. The Clerk (Mr. J. R. Hartley) said the word "preceding" was evidently an error in the wording of the Act. The objection had been raised before. Mr. Pigge pointed out that this was a criminal prosecution under a penal statute. Such a statute must be considered in its literal meaning, if the words were clear. It was not for the Bench to say that the wording of the section might be made to mean more than it implied. Mr. Leach said the Act distinctly stated "Every person dealing in margarine," etc. He submitted that the ordinary common-sense construction of section 6 meant that it included section 4. It could not be alleged that any person could be misled by the words. Mr. Pigge argued that in view of the specific use of the words "the preceding" in the early part of section 6, it was a question whether or not it referred to section 5 only. Further conversation ensued. Eventually the magistrates retired to consider their decision in private. On their return into court, the Chairman said the Bench regarded the cases of this description which had been before them recently as deliberate attempts to impose upon the public. They had decided to inflict the highest possible penalty—£20 and costs or two months' imprisonment

in each case. Mr. Leach asked for the remaining summonses to be withdrawn, and the magistrates consented. The total amount of the fines was £42 7s. 6d., and this was paid by the defendant.

At Sedgley Police Court, on December 18th, before Mr. Neville (Stipendiary), David Flavell, grocer, Luke Street, Lower Gornal, was summoned for neglecting to label margarine. Mr. W. A. Foster defended. Mr. Toy, assistant inspector, stated that he visited defendant's shop, and asked for ½ lb. of butter from a piece which was standing on a sideboard. An assistant told him it was margarine, but it was not labelled. Mr. Van Tromp, inspector, said the substance contained 4 per cent. of butter. A margarine label was subsequently produced, and it was alleged it had fallen down. Mr. Foster mentioned that defendant had been in business 27 years, and contended that he had no intention to defraud. Defendant was fined £3, including costs.

At the Wednesbury Police Court, on December 19th, Clara Hunt, grocer, Meeting Street, was, at the Stipendiary Court, fined 40s. and costs for exposing for sale margarine which was not properly labelled. Mr. J. S. Sharpe (West Bromwich) defended.

At Swords Petty Sessions, Sergeant Maguinness, Inspector of Food and Drugs, summoned Margaret Weldon, Swords, for that the defendant did, on the 15th November, sell to him a half-pound of butter which was not pure, but was composed almost entirely of fats foreign to it. From the evidence given by the sergeant it appeared that on the above date he entered the shop of the defendant for the purpose of making an inspection. There were two lumps of butter on the counter, and he asked the young lady who was in the shop at the time what was the price per lb. She told him, and he purchased a pound, and told her he wanted it for analysis. (Witness here produced a certificate of analysis from Sir Charles Cameron showing that it was margarine instead of butter.) He stated that he had her also summoned for exposing margarine for sale without a proper label. He also stated that Mrs. Weldon was not in the shop at the time he entered, but subsequently came in and told him that the butter referred to was not sold as butter. He (complainant) asked her why she hadn't it labelled, and she produced a proper label and said that she had not time to label it, as she was only after putting it on the counter, having purchased it on the day previous in Dublin. Mrs. Weldon said she had nothing to say more than what she had told the sergeant and what he was after stating, which was true. She produced the label as shown to the sergeant, and the magistrates approved of it. The magistrates decided to fine her 1s. in each case and 5s. costs.—Same complainant summoned Michael Murphy, Ballisk, for exposing for sale margarine without being labelled. The sergeant stated that in this case there was a label produced, which was supposed to have fallen off. The Chairman said that he could not let such a case off without a fine, and therefore the defendant would have to pay 1s. and costs.—Catherine Kernan was fined 5s. and costs for exposing for sale margarine as butter, and also for not having it labelled as such. Mr. Early, solicitor, appeared for defendant in this case.

At the Manchester City Police Court, on December 21st, before Mr. Headlam, the stipendiary, Alice Done, of Tame-street, Ancoats, was summoned by the Sanitary Committee of the Manchester Corporation, for exposing for sale unlabelled margarine, and not delivering it in a stamped wrapper. Mr. A. T. Rook, superintendent of the sanitary department, who prosecuted, stated that in consequence of a statement made by the defendant to Inspector Houlston, when he made the purchase, a summons had also been taken out against John Milner, of Tetlow-street, Ancoats, wholesale provision dealer. Inspector Houlston, examined by Mr. Rook, stated that on the 21st November he visited the defendant's shop, and asked to be supplied with a pound of butter from a parcel which was marked "pure butter, 1s." He paid a shilling,

and the defendant said it was best mixture. Whilst he was dividing the sample, he drew her attention to the fact that the "mixture" was margarine, and ought to be served in a stamped wrapper. The defendant replied that she was not aware of that, and that the wholesale dealer had told her it was a "mixture," and she could sell it as butter. It was not delivered to her in a stamped wrapper, and she did not think she should serve it to him in a stamped wrapper. Mr. Chas. Eastcourt, the city analyst said that the sample in question contained 75 per cent. of foreign fat and 25 per cent. butter fat, and sold at 1s. a pound it would realise a large profit. Alice Done (the defendant) stated that she asked for shilling butter to be supplied to her, and she did not know it was margarine till the inspector told her. Mr. Milner had spoken about its being "mixture," but she did not know the difference between "best mixture" and "pure butter." The Stipendiary said he thought the defendant was not altogether free from blame, and he should fine her 40s. and costs. The case against the wholesale dealer, John Milner, of Tetlow-street, Ancoats, was then gone into. The defendant was represented by Mr. Overend Evans (barrister), instructed by Messrs. Farrar & Co. Mr. Rook stated that the defendant was summoned for delivering margarine and selling margarine to Alice Done, the previous defendant, in a package which was not duly branded and marked margarine. In consequence of what the previous defendant told the inspector, he thought it his duty to see if her statement was true, and accordingly the inspector met Mr. Milner's servant in the act of delivering another parcel of butter substance at the last defendant's, and which was delivered in plain paper, and not marked as required by the Act. The defendant was in a fair way of business, and he could not plead innocence in the matter. For the defence, Mr. Evans stated Mr. Milner bought his margarine in tubs of 28lb. weight from Messrs. Lonsdale, Thompson and Co., Ltd., and they were all marked in accordance with the Act. His usual custom was to sell the whole package at a time, but this particular customer not being in a large way of business he divided the tub and let her have 14lbs., and he had given instructions that margarine sold in this way must be marked. If the Stipendiary read the word "package" as including a parcel, then there had been a technical breach of the Act. The defendant himself sold the butter to Miss Done, and he told her he could supply her with a mixture at 7³/₄d. It was not called best mixture, and it was not so entered in their books. The defendant was called and gave evidence, being cross-examined by Mr. Rook. He said that he had seen reports of prosecutions in the *Grocers' Review*, and that was the reason he had given instructions as to the marking of margarine. The Stipendiary said he was afraid that the Act was not complied with very strictly in this case, and he should impose a fine of £5 and costs.

WILLIAM SHAW, of Every-street, Ancoats, was also fined 20s. and costs for exposing for sale margarine unlabelled.

MILK OF SULPHUR.

SAMUEL DEAN, manager of the Co-operative Society's Stores, Cononley, was fined 20s. and costs, at Skipton, on Saturday, December 9th, for selling milk of sulphur which did not conform with the requirements of the British Pharmacopœia.

SPIRIT OF NITRE.

AN important point was raised in a case of the County Police Court, Huddersfield, against Dennison Priestley, grocer, Golcar, who was charged by Inspector Newbould, with having sold by the hands of his wife, "sweet spirit of nitre," which was not of the nature, substance, and quality demanded. It was contended for the defence that the wrong person had been summoned, inasmuch as the sale was made by defendant's wife, who ought to have been summoned as the servant or agent, or

it must be shown that defendant had a guilty knowledge of the transaction. The Inspector asked that the case might be adjourned, as the point was so important that he ought to have legal assistance. The Chairman said the Bench was inclined to dismiss the summons in face of the point raised by the defence. After some conversation, however, it was arranged that the case should be adjourned for a month, the Inspector paying a guinea-and-a-half expenses.

TEA IN PACKETS.

Interesting Point.

At the Newcastle Police Court, last week, the Bombay Tea Company (Limited), 76, Clayton Street, Newcastle, whose registered office is in Moor Street, Birmingham, were charged, under Section 2, Sub-section 2, of the Merchandise Marks Act, 1887, with having unlawfully sold to William Langley, 41, Mansfield Street, "certain goods, to wit, two half-pounds weight of tea, to which a false trade description within the meaning of the Merchandise Marks Act, 1887, was applied. There were two charges—one on December 2nd and the other on December 9th. Mr. W. J. Ward prosecuted, and Mr. E. Clark defended. Mr. Ward said the facts were short, but the matter was one of importance. On December 2nd, Mr. Langley went to the defendant company's shop, and asked for two half-pounds of tea. He was supplied with two packets, which he took to the inspector of weights and measures. The inspector's investigations resulted thus: The tea alone in one packet weighed 144¹/₂ grains less than half a pound, the tea and the paper weighed ¹/₂lb. and 24 grains, and the tea, paper, and a red ticket upon it weighed ¹/₂lb. and 39¹/₂ grains; in the second packet the tea alone weighed 132 grains short of half a pound, with the paper ¹/₂lb. 35 grains; tea, paper, and ticket, together, ¹/₂lb. 49¹/₂ grains. On December 9th the prosecutor was supplied by the defendants with two more half-pounds of tea, and they, too, were given to the inspector of weights and measures. One packet was found to contain 149¹/₂ grains short of half a pound without the paper, with the paper ¹/₂lb. and 13 grains; tea, paper, and ticket ¹/₂lb. and 32 grains. In the second packet the tea alone was 132 grains short of half a pound, tea and paper 13 grains short of half a pound, and tea and paper and ticket weighed ¹/₂lb. and 2 grains. There was a notice on each half-pound of tea—the notice as a rule was illegible—which said that the weight of a packet, including the wrapper, was half a pound, but no notice was given of that fact to the customer, and unless he looked for the notice he would not find it, and even if he did look the notice was so indistinct in many cases that he would not see it. Assuming that the notice was most distinct, he said that if a man went into a shop and asked for half a pound of tea he was entitled to half a pound of tea, in addition to the paper. The system of the defendants was a great fraud on the poor, for they were the people who went to such shops because presents were given with the purchase. Mr. Clark said the defendants were not charged with fraud, and he was prepared to explain why the defendant's made the representation. Mr. Ward said the representation was a very important matter, because if a person wanted a pound of tea he could not get it; he was bound to take two half-pounds, and the defendants thus got the benefit of two lots of paper. Some cases had been decided in London as showing the extent to which this sort of thing could go on. Mr. Clark objected. He said these cases had been decided by magistrates, and the Newcastle magistrates were quite as capable as the London magistrates. Mr. Ward remarked that the difference in additional profit from the paper to the defendants, as shown by the London cases, was £11,000 annually. The prosecutors in the London cases, and the defendants in these cases were identical and the same. The prosecutors were Brooke, Bond, and Co., some of whose directors were large shareholders in the Bombay Tea Company. Mr. Clark objected. Mr. Ward said the Bombay Tea Company was

really Brooke, Bond, and Co., and he had there the list of the principal shareholders. So that while they were posing on the one hand as the pioneers of purity, on the other they were making £11,000 extra profit, which they had no right to make. It might interest the Bench to know who were the principal shareholders. Mr. Clark objected, saying this was a very nice way of damaging the Bombay Tea Company. The chairman thought the matter was not material. The Magistrates' Clerk (Mr. Roberts) ; If they have been the prosecutors, then they will know the point in dispute. Mr. Ward ; The prosecutor in the London case is one of the subscribers to the memorandum of association of this company. Mr. Clark objected entirely, and said the matter had nothing whatever to do with this case. The Chairman thought the London case ought to be kept out. Mr. Ward said he only wanted to say that Brooke, Bent, and Co., were trying to shield themselves. Mr. Clark said they came boldly forward to defend what they were doing. Mr. Ward said it was really an evasion of the Act. Mr. Clark admitted the facts. William Langley was then called, and spoke to buying the packets of tea, and handing them over as he got them to the inspector of weights and measures. Nothing was said to him when he bought the tea. He asked for two half-pounds of tea; the assistant took two packets, put them in a sheet of paper, tied them up, and handed the package to him. Mr. Roberts : Nothing was said as to weight ? Witness : Nothing. William Taylor Denton, inspector of weights and measures, gave evidence bearing out the figures given by Mr. Ward as to the weight of the several packets of tea. Mr. Roberts : In one case in the High Court the defence was that there was a custom. Mr. Clark : I don't intend to set up custom. Witness : There is no custom. Mr. Ward : Can you say what the difference in profit would be ? Mr. Roberts : That is a matter of arithmetic. Mr. Clark said he supposed the issue that they were trying was whether or not the defendants had given a false trade description in the general sense of the term. If the defendants had issued their packets and papers without any printed matter thereon, they could not have appeared in that case, because it had been decided that a false representation under the Merchandise Marks Act could not be made verbally ; it must be something in writing. Mr. Ward : That has not been decided. Mr. Clark : I think it is accepted, but I don't say decided. The Act, he said, did not extend to false description. In this case no verbal representation was made. The buyer did all the talking. The defendants took his money, and gave him what he asked for. He knew well that in the tea trade, as in other trades, people did their best to avoid Acts of Parliament. He was going to admit that the defendants avoided the Act purposely, and were willing to take the consequences. There was no verbal representation made. The representation was "Weight of this packet, including the wrapper, is half a pound." This was the only representation that was made. The public were informed that they sold tea and paper together, and the public appreciated what they did. If the public did not like it they need not buy the tea. All the Act said was that they should not misdescribe the quality or weight of any article by any description that was given of it. A seller must not falsely describe goods as to weight or quality. The defendants told the public that they sold paper and tea, and how it could be argued that they came within the Act he was at a loss to see. Mr. Ward said the prosecution said that there was a false trade description. The expression "Trade description" meant "any description, statement, or other indication, direct or indirect, as number, quality," and so forth. When a person asked for half a pound of tea, there was an indication, direct or indirect, that that was what was asked for. In this case, he contended, the defendants gave an indirect indication of it. Mr. Clark said the defendants made a representation, which he said was true. The Bench said that the point raised for the first time in that Court. It was of great importance to the public generally, and they would take three weeks to consider their decision.

GOLDEN SYRUP.

At Westminster, on December 19th, David Jones, of 20, Dorset Street, Westminster, was summoned before Mr. Horace Smith, by the local vestry for selling a treacle called golden syrup, which was adulterated with 80 per cent. of glucose. Mr. Percy Gates, prosecuting for the vestry, said the adulterant, made from starch, was much cheaper than cane sugar, from which golden syrup should be prepared. The defendant said he acted in ignorance, but it was the fact that pure golden syrup could not be retailed at 2½d. a pound, the price at which he retailed. People wanted a cheap treacle of light colour. Mr. Horace Smith fined him 5s. and 11s. 6d. costs.

At Durham on December 20th, Pearman and Corder, Limited, Sunderland, were summoned under the Food and Drugs Act with unlawfully and knowingly giving a label marked "golden syrup," which falsely described the said syrup. Mr. Scott-Elder (County Council Inspector) prosecuted, and Mr. Crow defended. Mr. Scott-Elder said the defendants were large wholesale and provision dealers at Sunderland. A sample of golden syrup was purchased from a trader, whose name he would not mention, because their workshops would know the harm these cases did traders, who had no more to do with the adulteration of the article than either their workshops or himself. Two tins of the syrup were bought from the trader in question, and each tin bore no less than four declarations as to the purity of the article. These declarations were "Pure Brand." "Pure Golden Syrup." "Warranted pure, wholesome, and nutritious," etc. Nobody outside Sedgfield Asylum would in the face of these declarations expect they were getting anything but what was pure ; but as a matter of fact, the syrup in question was not pure, but contained other ingredients. He would draw their workshops' attention to a label on the top of the tin the size of a halfpenny, which read as follows :—"Made from sugar, with a proportion of other ingredients." One label, therefore, stated the syrup was pure, and another stated it contained other ingredients. They had found there was no less than 15 per cent. of glucose in the syrup, which was not golden syrup in any sense of the term. Glucose was about only half as sweet as golden syrup ; it was also cheaper, and had no business to be mixed with and sold as golden syrup. The Pear brand golden syrup, the brand in question, was essentially Pearman and Corder's. He submitted that the public ought to know what they were buying. The penalty was not exceeding £20, but this was the first case of the kind in that Court, and he would not ask for the full fine. The Chairman : Is it contested that there is a percentage of glucose in the syrup ? Mr. Crow said it was not. He admitted Mr. Scott-Elder's certificate and everything he said, but his clients were only purchasers from another firm, and no one regretted more than they did that the syrup should have been found to contain this 15 per cent. of glucose. No charges had ever been made against them before. Until recently there had never been a charge of this sort, of glucose being put in golden syrup, made against any wholesale merchant, and it was only now that the analyst of the county of Durham had found this out. Fifteen per cent. was not injurious to health, and he (Mr. Crow) asked the Bench to deal with his clients leniently. The Chairman : It is not suggested it is injurious. The public must be protected in this matter. The syrup is not injurious to health, but it is a large firm, and they will have to pay a fine of £10 and costs.—Davison and Pickering, Limited, of Newcastle, were similarly summoned. Mr. Scott-Elder prosecuted, and Mr. A. G. Richards defended. Mr. Richards said there would be no difficulty in this case about the facts. The only question would be whether the label which was on the tin was sufficient to discharge his clients. Mr. Scott-Elder was pleased his friend had taken up this position for this reason. He believed this was the first case in the country where the labels had been called into question, and his friend was still under the impression that one label nullified another label. Now he was going to make

a confession as an inspector. They could not proceed against a trader. In this case, however, the trader had protected the retailer, and by doing so had brought himself into condemnation. The facts were that on the 22nd November he himself called at Framwellgate Moor, and purchased there a pound of golden syrup, which was supplied him in two tins. Round one side of the tin were the words, "Crown Golden Syrup," and on the other side, "Warranted pure, free from beet and chemicals." On the top of the tin was another label, which had to be broken in order to open it. This label read, "Owing to the richness of the sugar from which our syrups are made, and their consequent liability to become sugary or solid, a proportion of grape sugar or glucose is added to prevent crystallisation. All our syrups are guaranteed to contain no injurious ingredient whatever." He admitted he could not proceed against the grocer, but he had proceeded against the person who gave the label. Although it was not part of his duty to prove the second label as being wrong he had got the county analyst to attend there to give evidence if desired. He would tell them that it was absolutely absurd to talk of glucose being added to golden syrup to prevent crystallisation. It did not do that at all. He would also tell them that there was no necessity for glucose to be added, and in fact hundreds of samples could be found without glucose. He (Mr. Scott-Elder) had not to disprove the second label. He had only to let one confound the other. The County Analyst was called, and stated that the addition of glucose did not prevent crystallisation. The Chairman: That is beside the question altogether. Mr. Richards said his clients were not aware there was any doubt on the subject of glucose preventing crystallisation. As Mr. Scott-Elder had said this was the first of the sort, and the whole of the trade, or a large proportion, were under the impression that they were protected by such a label as the one in question, it would be for the bench to decide as to whether they were so protected or not. Up to some little time ago the article in question was sold as golden syrup, but his clients found out that it must not contain any ingredient except golden syrup, however harmless it might be, unless there was a declaration to that effect. They therefore used the label across the top of the tin, and in doing so thought they were protecting the public from any misrepresentation. His friend said one label could not be neutralised by another label, but the very fact that the one label was put partly over the other one showed the intention to neutralise it. They had designedly covered one label up with another, and the bench could scarcely hold that what was underneath was an existing label. Therefore, if it was not existing, it was not given as a guarantee. His point was that one label was obliterated, and another one substituted. He contended that where they received a label from people and passed it on without having an opportunity of examining the article, they were not giving a label wrongfully. It was a matter of very great importance to traders. The manufacturers wrote them saying they considered they were perfectly protected by the label, and he trusted the bench would decide that the label was quite sufficient to meet the requirements of the statute. The Chairman said he would repeat what he said in the previous case, that the public must be protected. Defendants would have to pay a fine of £10 and costs. Mr. Richards asked the Bench to state a case.

OLIVE OIL.

ON Monday, December 11th, before the Malling (Kent) Bench, Charles Coulter was charged with selling cotton-seed oil as olive oil. The defence was that the purchaser was asked if he meant flask oil, and he replied that it would do. Ordered to pay the costs. On Saturday, December 9th, at Dartford Police Court, the International Tea Company, in reply to a charge of selling cotton-seed oil when olive oil was asked for, stated, through its solicitor, that the oil was sold under a guarantee of purity given by a wholesale firm in London.

The Bench, in dismissing the case, expressed the hope that some action would be taken against the firm who supplied cotton-seed oil for olive oil under a guarantee of purity.

COPPER IN PEAS.

DAVID RICE, provision dealer, Acton, was fined £8 and costs at Brentford Police Court, on Thursday, December 14th, for selling bottled green peas containing 2.0 grains of copper sulphate per lb. Defendant pleaded that he sold the peas as received. The Chairman advised him to get the amount of the fine back from the wholesale people.

BORIC ACID AS A PRESERVATIVE.

THE case against Messrs. Hudson Brothers, Limited, for selling clotted cream preserved with boric acid was to have been resumed at Westminster Police Court, on Thursday, December 14th, but at the request of the counsel for the defence, it was adjourned *sine die*.

THE USE OF SALT IN BUTTER.

(Continued from page 620.)

The following analyses, which are averages of an immense number, will show that a direct diminution of the water content of butter will take place through the addition of salt:—

			Salted.	Unsalted.
Water	...	...	11.95	13.07
Fat	...	...	84.27	85.24
Casein, sugar, &c	...	...	1.26	1.57
Ash	...	...	2.52	12

According to these analyses, unsalted butter contains over 1 per cent. more water, 3 per cent. more casein, milk sugar, &c., and 1 per cent. more fat than salted butter, while the latter contains about 2½ per cent. more ash (salt) than is found in the unsalted butter. The ash in the unsalted butter comes from the butter-milk remnants in the water drops. Unsalted butter also contains a larger proportion of non-fatty organic substances than salted butter, which tends to make it keep for a shorter time than salted butter. According to Kirchner, one-fifth to one-half of the salt added is lost through the subsequent working; the heavier the butter is salted, the smaller proportion of the salt will in general be incorporated in the butter. Analyses by Woll of a number of representative butters of different countries showed that the average salt content ranges from 0.77 per cent. (French) to 5.17 per cent. (Irish). It is a matter of common experience that salted butter will keep longer than unsalted butter; the latter kind will become rancid in a short time after it is made. Salt therefore preserves butter from decomposition. Salt is a preservative in so far as it checks the growth of germ life, but it must be understood that it is not a germ killer; it merely arrests germ growth. For this reason its antiseptic power is but limited, but the addition of salt to butter is of great benefit as regards its keeping qualities. As we have seen, salt tends to unite the small drops of water in the butter to larger ones, which may be easily expelled by working. Less favourable conditions are thereby created for the bacteria, the supply of moisture necessary for their development being reduced, and, as a result, also the centres of germ growth. The weight of butter before and after salting and working has been the subject of discussion and experiment during late years, from the fact that manufacturers of a coarse salt claim peculiar advantages for their special brand in this respect, viz: that the weight of butter after salting and working will invariably be increased by the use of coarse salt beyond that obtained with finer salt. The latest experiment, by Woll and Farrington, to test this matter, shows that coarse grained salt will, in the majority of cases, make more weight than the fine-grained salt. The difference is not very large, only 1.8 per cent. in the experiment in question, but, such as it is, it is a point in favour of coarse salt.

C. G. FREER-THONGER.

THE GOVERNMENT FOOD PRESERVATIVES INQUIRY.

THE Departmental Committee on Preservatives and Colouring Matter in Food held another sitting on December 19th, at St. Stephen's House, Westminster. Sir Herbert Maxwell, M.P., presided. Dr. Annett, of University College Laboratory, Liverpool, said from his experiments he inferred that the presence of preservatives in milk must be injurious, he would not say to adults, but certainly to infants. The preservatives might account directly for the large infant mortality from diarrhoea, and the rise of infant mortality in the last thirty years, when these preservatives had been used, gave colour to that opinion. Dr. Boyce, Professor of Pathology of University College Liverpool, said infants were likely to take harm from the use of preservatives in milk, but the experiments seemed to show that adults could take a considerable quantity with impunity. He would much prefer to see preservatives prohibited altogether. Dr. Robert Bell, of Glasgow, said he had had 20 years' experience of the administration of borax and boric acid, both internally and externally, and in surgical operations had found it a very valuable antiseptic. He saw in consultation occasionally a well-known Glasgow gentleman, who had taken boric acid regularly for over four years, and who but for his employment would have been dead long ago. Such a case was clear proof that the regular use of this acid in considerable doses was followed by beneficial results, where its administration was found to be necessary. He had never found its use attended by any but beneficial effects. It was one of the best agents that could be used as a food preservative. Boric acid was not in any way injurious to health when used in reasonable proportions.

On December 20th, the Departmental Committee on preservatives and colouring matters in food held another sitting at St. Stephen's House, Westminster. Sir Herbert Maxwell, M.P., presided. The other members of the Committee are Professor Thorpe, Dr. H. Timbrell Bulstrode, and Dr. F. W. Tunncliffe.

Mr. Robert McCracken, managing director of the United Creameries, Dunragit, Wigtownshire, said his company had been in the habit of using preservatives in milk, cream, and margarine, but not in butter. All their butter was sent out as fresh, nothing being added, not even salt. Fresh butter was not expected to keep any length of time. The preservative chiefly used was boracic acid and preparations of boracic acid, and such a preservative was, in his opinion, necessary. People now liked less salt than formerly. Margarine was not inferior as regarded keeping quality to butter. All butter put up to be kept had some preservative in it.

DANISH BUTTER

was a little salt, but in England it was called fresh. In Scotland, however, butter was only called fresh when there was absolutely nothing in it. In mixing the preservative with milk a little was dissolved in, say, a pint of milk, the pint being subsequently added to a larger quantity. The mixing was thorough. In cream the process was just the same.

The Chairman: We have had it in evidence that it is the practice of some vendors after the cream is put into the jar to throw dry borax on the top, which of course does not get perfectly mixed through it. That is not your practice?—No; it is all stirred well into it, and thoroughly mixed.

What would be the effect of the restriction or prohibition of preservatives in the milk trade? Cream could not be sent to a long distance and sold as it is now. It would not keep for any length of time without some preservative. The same applies to milk in summer weather.

Are you not aware that a large proportion of the milk supply of London, for example, is free from preservatives? I have no doubt that is so with a large proportion, but

some will have preservatives, and what is sent in without preservatives will be consumed very quickly.

THE EFFECT OF REFRIGERATION

will pass off before very long.

These preservatives are of comparatively modern use. How was the milk trade conducted before? Milk was not carried a great distance long ago. Formerly, the witness went on, milk was sold nearer where it was produced, but there were not so many dairies now in towns, and milk was therefore carried long distances. His dairy sent milk to London from Scotland. Milk received one morning at the dairy would be in London the next morning, and then it would have to be kept until it could be consumed. In his company's dairy they had from ten to fourteen thousand gallons a day of milk, obtained from four or five thousand cows. The farmer did not treat milk with a preservative before it reached the witness's company, there being a stipulation that it should not be so treated. They only used preservatives in milk in warm weather, the quantity being from one half an ounce to an ounce in a 16 gallon can.

Professor Thorpe: Why do you find it necessary to add preservatives to a substance like margarine? Because it enables it to keep longer. Change in margarine is induced by milk, which is added for flavour purposes.

But you could get that flavour in some other way than by the use of milk? I should be glad if you could find some other way.

Will you take it from me that there is a large quantity of

MARGARINE MADE IN HOLLAND

which contains no milk? I will take it from you.

And also that there is no preservative in it? Yes.

Have you tried sterilising the milk? No; we have made experiments, but I do not like the flavour, and I do not think it will ever become popular. The witness added that he could not say what the increased cost of sterilising or Pasteurising milk would be. His company did not send out much new milk; it was chiefly skim milk. The price obtained for skim milk would not allow of its being sterilised, but that was not the reason it was not done. This milk was sent to cities where it was sold as separated milk during winter, but in summer little of it was sold.

By Dr. Bulstrode: He was not aware that in Brussels they used no preservatives in milk, not that the Aylesbury Dairy Company carried on their trade without the use of any preservatives. If all milk were refrigerated at the farm there would be much less need for preservatives, but there were many farms where that could not be done—they had not the water supply. He would restrict the use of preservatives to a reasonable proportion, say, not exceeding 40 grains a gallon in milk, and in margarine about $\frac{1}{2}$ per cent.

The Chairman: Why have you found it unnecessary to treat fresh butter with preservatives; how long is that butter intended to keep?—In summer time it will keep about a week; in winter time it will keep a fortnight perfectly well.

We have had it in evidence that the Irish fresh butter trade would be ruined practically by the use of preservatives being restricted or prohibited. Is there any thing in the quality of

SCOTTISH BUTTER

which renders it easier to keep than Irish?—No; but our butter will be much more quickly on the market than the Irish butter. The butter we make to-day will be on the market to-morrow morning. Irish fresh butter does not keep very well.

You are purchasers of Irish butter?—Occasionally, when we run short.

The witness went on to say that there was nothing in Irish butter which rendered it necessary to add borax to it.

The difference in the butter was due to the method of manufacture and to the handling of the milk before the manufacturer got it. There should be nothing in pasturing to render one butter of better quality than another, supposing the cows were getting good water, etc. Very likely the addition of 1 per cent. of salt (the amount said to be in Danish butter) would interfere with the popularity of his company's butter; they required it absolutely fresh. A great deal of Danish butter was sold here as fresh, which, he thought, contained 1 per cent. of salt.

COLOURING MATTERS,

he continued, were almost universally used, but not in great variety, the chief being annatto. The object was to obtain uniformity of colour summer and winter in butter and cheese. If the witness's company discontinued their use, they would be cut out of some markets altogether, owing to the preferences of some places for one kind of butter and cheese, and of other places for different coloured produce. The object of colouring margarine was to make it resemble butter.

Suppose it were made obligatory on the manufacturer or vendor to sell articles with a declaration that they are artificially coloured, would that interfere with the trade?—No, I do not suppose it would, except to harass the salesman. One trade alone, however, should not be picked out; they should all be treated alike in this respect, otherwise there would be great objection to the course suggested.

The Chairman: How long does margarine treated with borax keep? A good deal depends on the margarine and the weather. Up to six weeks. It keeps far longer than fresh butter. It will compare with

SALT-CURED BUTTER.

Scotch creamery butter is much drier than Irish butter—fully as dry as Danish butter.

By Professor Thorpe: Some aniline colouring matters were used. They were obtained from the Dutch, but he had no knowledge of their nature. He could not say that one was a constituent of lyddite. (Laughter.)

Mr. Thomas Bond, consulting surgeon to the Westminster Hospital, said he did not think boracic acid or salicylic acid, in the quantities in which they were generally used as preservatives, were harmful, but, as there were certain diseases in which the administration of unknown quantities of boracic acid might be injurious, he was of opinion that the presence of a preservative in food should be notified by the vendor or manufacturer. He had given

BORACIC ACID,

which was largely used for preservative purposes, internally for many years, in doses of 10 grains, as an antiseptic, and had never found any ill effects—even following its administration for many weeks. His usual dose was 10 grains three times a day. It did not seem dangerous to him that a drug prescribed by a doctor should be liable to be taken by the patient from other sources in uncertain quantities. Even in the case of children, he did not think there would be any risk.

Do you think the public would be justified in insisting that the presence of that drug should be notified in all articles preserved by it? Yes; I think that would be a proper thing to do. At the same time, I believe it to be

AN ABSOLUTELY INNOCUOUS PRESERVATIVE.

If a child of one or two years took 15, or perhaps 20, grains a day, the quantity it might get in four pints of milk, that would be more than I would like to give the child, but I know of no harm that has resulted.

You think a medical man in prescribing for a patient ought to know whether or not the patient is taking something which might modify his treatment of the case? Yes.

Therefore you would advocate that if preservatives are used the nature and amount should be stated? Yes; I

think that would be an excellent thing to do. With regard to salicylic acid, the witness said he had given it in the same doses as boracic acid, and had never seen the slightest ill effects from it. If used as a preservative its presence and quantity should be stated. Two grains in

A POUND OF JAM—

sufficient to preserve it—would do less harm than the pound of jam. Ten grains each in a quart bottle of wine, cider, or beer would be safe, and if a man drank a bottle of each the 30 grains of salicylic acid would do him less harm than the alcohol. (Laughter.) He was distinctly of opinion that the presence and quantity of preservatives generally should be stated.

Other evidence having been given by Mr. Christopher J. Dunn, chairman of the Cork Butter Market Trustees, and a governor of the Munster Dairy and Agricultural Institute, the Committee adjourned.

EVIDENCE OF ANALYSTS.

ON December 21st the Departmental Committee appointed by the Local Government Board held a further sitting at St. Stephen's House, Westminster. Sir Herbert Maxwell, M.P., presided, and the other members of the Committee present were Professor Thorpe, Dr. H. Timbrell Bulstrode, and Dr. F. W. Tunncliffe.

Mr. James Brierley, analyst to the county borough of Southampton, who was the first witness, said he had devoted some observation to the presence of preservatives in foods during the past twenty-five years. He had only discovered preservatives in milk, wine, and butter. Except in the case of wine the preservatives used were formalin and boracic acid. He had found that the

USE OF PRESERVATIVES WAS INCREASING.

During the past ten years they had been used much more largely than formerly. As to milk, from the statements which had been made to him by persons who used preservatives the quantities employed were large. Only last week he was informed that in the case of a certain dealer the practice was to use 100 grains of the preservative to the gallon, or 12 grains to the pint. That, in his opinion, was an excessive quantity. It was used in the summer months; in the winter it was scarcely ever found. When milk went bad in spite of the use of the preservative it became stinking, and did not smell sour, as in the case of unpreserved milk.

Sir H. Maxwell: If preservatives were prohibited or severely restricted would it interfere much with the milk trade in your district?

The witness said the result would be that the milk dealers would have large quantities of milk thrown on their hands as useless. The persons who used the preservatives were not so much the farmers as the wholesale dealers. He did not think that preservatives were necessary in

BUTTER.

He would suggest that the preservatives should be limited to formalin. The quantities of formalin required were much less than in the case of other preservatives. Salicylic acid he had found to be used in wine.

By Professor Thorpe: He had found that in Southampton chemists were using plain boracic acid as a preservative.

By Dr. Bulstrode: He found that preservatives were used in larger quantities in imported milk than in milk of home production. He did not think that it would be desirable for children to take two or three pints of milk a day, each containing $4\frac{1}{2}$ grains of boracic acid, but he doubted if the children of the poor drank as much as one pint of pure milk a day. He did not think they would get more than a halfpennyworth or a pennyworth per day. Milk in a refrigerator could be sent to South Africa and brought home again without deterioration—only, of course, it had to be thawed before using. More milk was brought

to market now than formerly. In North-east Lancashire, which was his native place, he was acquainted with farming operations. On one farm with which he was acquainted the milk was never sent into town at all. The milk was allowed to stand, and the cream was skimmed off and made into butter, the skimmed milk being given to the calves and the cattle and the butter milk to the pigs. The butter was sent to Bury or Blackburn—which ever was the best market—twice a week.

By the Chairman: He found that all the low-class butters and margarine were artificially coloured. Margarine was coloured to imitate butter.

By Dr. Bulstrode: He did not know that bad effects had followed from the use of colouring materials in butter, nor indeed from the use of copper in peas, although he was aware that copper was used in peas.

Mr. W. F. Lowe, public analyst for the counties of Flint, Carnarvon, Anglesey, and Denbigh, and for the city of Chester, was then examined. He said he considered that the use of preservatives in all but a very few cases

SHOULD BE ENTIRELY PROHIBITED.

The necessity for them was entirely obviated by the use of cold storage, by which practically all food, even fruits, could be preserved without deterioration. In most cases preservatives could hardly fail to be more or less injurious to health, and especially to the health of weak persons and young children. As an instance of this he had during the hot weather of last summer a sample of milk brought to him for examination for preservatives, as it was believed to have made a baby two months old seriously ill with troublesome vomiting, or, as the parents said, to have

POISONED THE CHILD.

This milk contained an exceedingly small amount of formalin, and probably would not have been at all injurious to strong persons; in fact, he believed no one else in the house suffered from it. The doctor who attended the case attributed the illness to the formalin acting as an irritant. The habitual use of the powerful drugs used as preservatives was also very liable to injure the digestive organs of strong people. Besides its action on enzymes each of the drugs used as a preservative had its own special therapeutic effect. Boric acid, for instance, in large doses was said to produce sickness and diarrhoea, and in small doses to produce certain skin diseases. That it was a much more powerful drug than it was originally thought to be was proved by the dose specified in the new edition of the "British Pharmacopœia," 1898, having been reduced to one-half (from 30 grains to 15 grains). Salicylic acid was said to produce chronic dyspepsia if taken regularly, even in very small quantities. Another very strong objection to the use of preservatives was that they might be added to food that was already beginning to undergo decomposition, and which was therefore unfit for consumption, but by the use of powerful preservative, which arrested further decomposition, it could be made to appear good and sound. Salicylic acid, for instance, was largely used in

(To be continued next week.)

OBITUARY.

DEATH of Professor J. F. Hodges, M.D., F.I.C., etc. This highly respected and venerable Belfast gentleman has passed away at the advanced age of eighty-four, at his residence, Sandringham, Malone Road. The late Dr. Hodges was one whose great achievements belonged to a past generation. In his youth, intending to pursue a medical career, he became an apprentice to Dr. McCoubrey, in his native town of Downpatrick, the university of the student in those days, as of the apprentice to-day, evidently being the practical experience of the dispensing counter. In 1838, he took his degree of L.A.H., Dublin, and subsequently studied at Glasgow, where Professor Graham, afterwards Master of the Royal Mint, advised him to devote

his talents to chemistry; and Dr. Hodges, whilst he started medical practice, also developed great interest and skill in chemico-agricultural science. In Germany he studied under Baron Liebig. The latter was so impressed with his pupil's indefatigable research, ability, that as a mark of his high appreciation, he generously returned his fees, and thus was established betwixt both a life-lasting friendship. On his return to the north of Ireland, Dr. Hodges, lectured extensively on the New Agriculture, bringing about, in 1845, the formation of the Chemico-Agricultural Society, to which he became chemist. In 1846, he was appointed Professor of Chemistry in the old Belfast College. He occupied the chair of Agricultural Chemistry in Queen's College, being the author of various works upon the subject. He was also Lecturer in Medical Jurisprudence, holding both positions up to the time of his death. He was thus the last survivor of the original Q.C.B. professors. The Royal College of Chemistry, London, had him as one of its founders, and he was deputed to offer the Chair of Chemistry to Professor Will, then assistant to Baron Liebig; but the honour, being declined, was accepted by Professor Hoffmann. Dr. Hodges was also Government Analyst for many years and Public Analyst for five counties and the City of Belfast, though this short sketch does not by any means exhaust the record of the enterprises and high positions associated with his name, for almost every European country conferred upon him signal honours in recognition of his distinguished talents.—*Pharm. Jour.*

CORRESPONDENCE.

THE PERCENTAGE OF WATER IN IRISH BUTTER.

TO THE EDITOR OF *Food and Sanitation*.

DEAR SIR,—The analyses of 107 samples of butter from the Surprise Butter Competitions, conducted by the Irish Dairy Association during the month of November show an average percentage of water of 12.08. Two of the samples showed less than 9 per cent. of water, and two others less than 10 per cent. These were, of course, exceptional samples, but it is worthy of note that none of the butters examined were found to contain an excess of water, and were remarkably uniform, considering that they were drawn from all parts of Ireland, ranging from Donegal in the north to Cork in the south. Thirteen samples showed less than 11 per cent. of moisture; 26 others showed between 11 and 12 per cent., 42 showed between 13 and 14 per cent., whilst one gave 14.1, two 14.2, one 14.3, one 14.4, two 14.6, and the highest percentage found was in the remaining sample, which contained 14.7 per cent. of water.

The whole of these 107 samples were of Irish centrifugal creamery butter, and the results go far to prove that in cool weather, or when the creameries are not suffering from an ice famine, Irish centrifugal creamery butter does not contain more, if, indeed, it contains as much, moisture as any other first-class make of butter. As the butter from which these samples were taken were not in any sense specially prepared, the results may fairly be taken to represent the quality as regards moisture of the Irish make during the month of November.

The samples were taken and analysed by Messrs. Thorp and Platt, of the Analytical Laboratory, Limerick.

Yours faithfully,

WATER THORP,

Hon. Sec. "Irish Dairy Association."

December 22nd, 1899.

